CEDARE

SCP Assessment

STATE OF SUSTAINABLE CONSUMPTION AND PRODUCTION (SCP) POLICIES IN EGYPT | 2015

UNEP

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SwitchMed Programme is funded by the European Union

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SwitchMed Programme is implemented by the United Nations Industrial Development Organisation (UNIDO) and the United Nations Environment Programme (UNEP), through the Mediterranean Action Plan (MAP) and its Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) and the Division of Technology, Industry and Economics (DTIE).
For details on the SwitchMed Programme please contact **btuncer@scprac.org**

FOREWORD

Envisioning a more sustainable Egypt is no longer a dream nor an unrealistic endeavor. This realization in itself is a great achievement to behold, given that state officials at all levels spearheaded by the president, have made it very clear that sustainable development is a key objective for Egypt. It is now perceived as a strategic instrumental policy framework for a more prosperous future Egypt.

The panacea of all public and official lobbying efforts for adopting a national agenda for sustainable development, have resulted in a widely declared endorsement during the proceedings of the 'Egypt the Future' the Egypt Economic Development Conference (EEDC). The conference convened in Sharm El-Sheikh on the 13-15th March 2015, is a key milestone of the government's medium-term economic development plan. Thus reflecting a national consensus designed to overcome current economic challenges and bring prosperity and improved social services to the people of Egypt.

At this international gathering attended by several global leaders and the Chief Executive Officers of major international companies, Egypt announced its launching of its Sustainable Development strategy for 2030. The new vision aims to strategically position Egypt among the world's emerging economies. The main objective of the strategy is to integrate sustainable development principles across sectors.

The process of development of the strategy involved the participation of different ministries and stakeholders. The Ministry of Environment played a leading role in collaboration with the Ministry of Planning in this context of a strong partnership with the Ministry of Planning.

Against this backdrop, it is clear that the national policy development process has been set forth to endorse more actionable activities to both expedite a transition towards green economy, and achieve sustainable development. This is particularly important since the global development community is dynamically discussing 'Post 2015 Development Agenda' and the sustainable development goals (SDGs) to replace last decade's millennium development goals (MDGs); yet another important consideration underlying Egypt's new sustainability outlook.

In this respect, Egypt's Ministry of Environment has been working in recent years with the support of international partners, especially the United Nations Environment Programme (UNEP) to pave the way for mainstreaming green economy and sustainable consumption and production related policies as tools to achieve sustainable development. Towards this end a 'Green Economy Scoping Study' for Egypt was developed and later launched in collaboration with the Center for Environment and Development for the Arab Region and Europe (CEDARE) and UNEP.

This publication at hand addressing 'Sustainable Consumption and Production National Action Plan for Egypt' is considered another significant stepping stone contributing to a continuum of knowledge accumulation for nationally integrating sustainability in Egypt's key economic sectors. The national action plan addresses four priority sectors including: Energy, Agriculture, Municipal Solid Waste and Water.

More importantly this publication is a blueprint for actionable activities that could be translated into operational projects accompanied with policy interventions required for the actual implementation of Egypt's sustainable development goals and economic priorities. This national action plan when implemented, will mainstream the newly introduced concepts and tools of sustainable consumption and production into Egypt's overall sustainable development policy framework and gradually alter unsustainable consumption and production patterns by introducing policies and projects that could provide better informed decision making processes and success stories that can be replicated and up-scaled on the national level in different geographic regions.

It is therefore my pleasure to thank on behalf of the Ministry of Environment our partners at the European Commission for funding the project and our partners at UNEP and CEDARE for leading and facilitating the development process of the action plan with the support of the ministry's team and focal points. I would like to underscore the importance of the consultation process and the participatory approach that has been endorsed to develop the national action plan and to ensure its realistic reflection of Egypt's actual socio-economic and environmental needs and aspirations

This national action plan is the beginning of a long journey ahead, towards having future generations of Egyptians living in sustainable communities and cities.

Dr. Khaled Fahmy

Minister of Environment

ACKNOWLEDGMENTS

We would like to thank all those who gave their time to participate in the research and answered our questions. Without their willing participation and integral contributions, the project would not have been possible.
This document has been prepared and coordinated by the Centre for Environment and Development for the Arab Region and Europe (CEDARE) on behalf of the Egyptian Environmental Affairs Agency (EEAA), and Ministry of Environment (MoE).

Special thanks are due to **Dr. Hussein M. Abaza,** and **Ms. Sina Hbous,** for authoring the document and for their substantive contribution and valuable input. The overall development process for the action plan has been coordinated by **Dr. Hossam Allam,** Regional Programme Manager of SGP and **Luc Reuter,** the action plan's focal point on behalf of UNEP.

The CEDARE Team would like to extend gratitude the four-sector experts that have been selected to support the consultation and participatory journey to contribute to the formulation of final action plan through their technical expertise. These include:

Agriculture:	**H.E. Dr. Ayman Abou Hadid,** Former Minister of Agriculture.
Water:	**Dr. Khaled Abuzeid,** Regional Director of Water Management Department, CEDARE.
Energy:	**Dr. Anhar Hegazi,** Senior Expert
Waste Management:	**Mr. Tawfik Elkheshen,** Economic and Financial Advisor, National solid Waste Management Programme, Ministry of Environment

Supervision and coordination

Luc Reuter, SwitchMed Coordinator, UNEP-DTIE

Support

UNEP would further like to thank:

Arab Hoballah	Chief Sustainable Lifestyles Cities and Industry Branch, UNEP-DTIE,
Elisa Tonda	Head Responsible Industry and Value Chain Unit, UNEP-DTIE
Charles Arden-Clarke	Head 10YFP Secretariat
Fareed Bushehri	UNEP-Regional Office for West Asia
Yulia Rubleva	UNEP-DTIE

About SwitchMed

The EU funded SwitchMed project is implemented jointly by the project countries (Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestine and Tunisia) and the institutional partners UNEP, UNIDO and SCP-RAC. SwitchMed is divided into 3 components addressing different parts of the transition process to Sustainable Consumption and Production (SCP) - SDG12:

(i) A policy component, built around the Barcelona convention (for the Protection of the Mediterranean Sea and Coastal Regions) and SCP national action plans;

(ii) Demonstration activities linked both to the policy component and the private sector;

(iii) Networking function to allow for exchange, joint learning and further scaling up;

UNEP-DTIE is coordinating the national policy component – Reinforcing circular economy in the Mediterranean governance framework and mainstreaming SCP in national policies. Under the national policy component the project countries will develop Sustainable Consumption and Production National Action Plans (SCP-NAP).

The implementation methodology used under the SwitchMed national policy component has been adapted to each countries' specific needs and requests. To assure coherence between ongoing and previous national work, the activities at country level build on already existing work and projects (Green Economy, SCP assessments, sustainable development assessment and strategies, SCP projects, etc). In this process UNEP works with national consultants in the project countries to allow a transfer of knowledge and reinforcement of national capacity. The SCP-NAP methodology assures that a large and diverse group of national stakeholders are involved in the national process (government, civil society, private sector, media, academia, bi- and multilateral partners, UNCTs, etc). Furthermore collaborations with UN institutions and other bi-lateral partners have been established at country level.

Main objectives:

- Leapfrogging to socially inclusive Sustainable Consumption and Production practices preserving the environment;
- Integrating the natural capital and the environment in the core business of Mediterranean companies
- Creating a critical mass of citizens for SCP;

The successful development of eight SCP-NAPs demonstrates that:

(i) in-country activities have to be nationally owned and nationally driven to be successful;

(ii) the involvement of a large and diverse group of national stakeholders from the beginning of the planning process is crucial;

(iii) linkages and synergies have to be established with already existing projects and initiatives and collaboration with other partners should be encouraged and fostered.

Each country has chosen to follow its own path to develop an SCP-NAP and this series of publications clearly shows the diversity of processes as well as outputs. In some countries the SCP-NAPs are based on SCP national assessments, while in other national partners decided to build upon already existing national SCP information and knowledge.

Executive Summary:

In recent years with Egypt's political transition, sustainable development has proved to be one of the key concepts that Egypt needed to adopt. A consistent and gradual transformation towards a green economy (GE) and the integration of sustainable consumption and production (SCP) approaches are beginning to frame and govern the general national framework for sustainable development policies in Egypt. In some instances, sustainable development policies are emphasized and expressed in Government priorities and policy directives, whilst in many instances their impact and significance have been overlooked.

The main objectives of this document is to lay out the framework for an Action Plan for sustainable consumption and production in Egypt. The Action Plan builds on recent studies[i] that have been undertaken in this area and which provided a review of the Egyptian Government's efforts to promote green policies and integrate environmental considerations in some sectors. This document has been prepared as part of the activities under the Regional SWITCH-Med project with the Ministry of Environment as focal point in Egypt through a collaborative effort involving the Centre for Environment and Development for the Arab Region and Europe (CEDARE) and the United Nations Environment Programme (UNEP).

It explores recent updates relevant to GE and SCP in an effort to monitor the current challenges and opportunities that face emerging priority sectors in Egypt, including energy, waste, water, and agriculture. The preparation of this document will assist in making a better assessment and of existing policy gaps, efficiency in the implementation of programmes and plans, in addition to the identification of priorities, projects, and activities. The process of formulating the National Action Plan will be based on this detailed baseline and assessment study.

As a starting point and after outlining the objective and methodology to be adopted in developing the Action Plan in the first chapter; underlying SCP principles in the Egyptian context are thoroughly explored. The second chapter of the document will begin with a section providing a relevant definition and appropriate policy framework relevant to the local socio-economic and environmental conditions in Egypt.

Another section focuses on highlighting the importance of existing inter linkages between GE and SCP, including consideration for economic sustainability, social inclusion and poverty eradication, and environmental integrity. The importance of the life cycle approach is also highlighted as an integral constituent of any SCP policy approach. While, the second chapter concludes by explaining the rationale for adopting SCP policies in Egypt.

The third chapter serves as an introduction to a more detailed overview of SCP polices in Egypt on a general level. Whereas, the fourth chapter particularly focuses on recent SCP policy developments in each of the selected priority sectors. These include agriculture, energy, water and municipal solid waste. For each sector recent adopted package of policy measures and tools, including institutions, regulations, and market-based instruments will be identified.

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CHAPTER 1: Introduction

1.1 Background

The 10-Year Framework Programme for Sustainable Consumption and Production (10YFP on SCP) aims at enhancing international cooperation to support regional and national initiatives to accelerate the shift towards SCP. This framework had emerged as a result of a proactive international policy agenda that began with Agenda 21 in 1992, followed by the 2002 Johannesburg Summit and the Marrakech Process to support national and regional initiatives to accelerate the shift towards SCP.

The 10YFP is a concrete outcome of the Rio+20 Summit. It is a global framework of action to enhance international cooperation to accelerate the shift towards SCP in both developed and developing countries [ii]. The significance of the framework is best described through paragraph 1 provision a mentioned below[iii]:

Fundamental changes in the way societies produce and consume are indispensable for achieving global sustainable development. All countries should promote sustainable consumption and production patterns, with developed countries taking the lead and with all countries benefiting from the process, taking into account the Rio principles, including, inter alia, the principle of common but differentiated responsibilities as set out in principle 7 of the Rio Declaration on Environment and Development. Governments, relevant international organizations, the private sector and all major groups should play an active role in changing unsustainable consumption and production patterns.

In follow up of these efforts at the national level, Egypt in 2008 undertook a study on "Sustainable Consumption and Production for Cairo City". [iv] The study aimed at providing incentives for the introduction of sustainable consumption and production patterns at the city level. A national committee for sustainable development was created in 2006 and a strategy framework for sustainable development was developed.

Continuing these activities and policies, CEDARE in cooperation with UNEP and the Egyptian Ministry of Environment undertook a comprehensive "Green Economy Scoping Study for Egypt" in 2013 to assess the potential for Egypt's transition to a green economy and sustainable development. The study can be considered as an initial stepping-stone towards introducing green and sustainable policies in Egypt. Inherent in this process is a transformation towards a more sustainable consumption and production patterns. The study has focused on water, agriculture, energy and municipal solid waste.

As a next step to upscale its current efforts to roll-out sustainable development in Egypt, the Egyptian Ministry of Environment with the support of UNEP and CEDARE has decided to develop a SCP National Action Plan for Egypt under the framework of the SWITCH-Med project funded by the European Commission (EC) and in-line with the 10-Year Framework Programme for Sustainable Consumption and Production (10YFP).

The main objective of the project at hand is to assist national entities in Egypt formulate national action plans for SCP in the four identified priority sectors (water, agriculture, energy, and municipal solid waste).The proposed National Action Plan aims at supporting Egypt's development efforts in achieving sustainable development by promoting the efficient allocation and use of resources, waste prevention, reduction, recycling, reuse, and recovery. This should ultimately lead to an equitable distribution of wealth, poverty reduction and an improved environment, health and human welfare. The specific objectives of the action plan include the following:

- Produce a comprehensive National Action Plan that provides policies and directives to promote SCP patterns;
- Deepen existing research on benefits, methods, principles and approaches for SCP;
- Mainstream SCP into overall sustainable development policies, programmes and strategies, as appropriate ;
- Consider SCP key enabling factors and conditions, including policy reforms and capacity development, with a focus on strengthening capacities for SCP management;
- Provide actionable recommendations on institutional mechanisms and processes that would better enable the national and local government entities, the private sector and civil society to contribute to the national decision making process to achieve sustainable development; and
- Present a list of projects and activities with clear timeframe, budgets and potential implementation partners.

The preparation of the National Action Plan will follow a two-pronged approach; expert feedback from professionals and community stakeholders through a consultative process, and the undertaking of a SCP needs assessment exercise [v] through this document. The multi-stakeholder consultation process has been discussed in details in a previous document titled "Roadmap to the National SCP Action Plan in Egypt".

1.2 Objective

Main objective of this assessment exercise is to identify policies and entities that are primarily involved in promoting sustainable consumption and production, by examining existing trends and patterns of policy changes and initiatives. And examining environmental policy tools including laws, agreements, market instruments, and voluntary initiatives that enable SCP will be explored.

Faced with complex and emerging challenges such as waste management, energy shortages, water scarcity and alarming environmental degradation, the Government is giving priority to integrating sustainability considerations in the management of natural resources. Moreover, the public call for social justice and equitable distribution of wealth and a sustained economic growth has been a driving force behind significant new policies tailored to balance the economic, social and environmental dimensions of sustainability.

The main objective of this undertaking is therefore to:

- **Identify SCP patterns and green policies in the four priority areas. (Energy, water, agriculture, and waste);**
- **Assess and evaluate the frequency and relevance of SCP policies as opposed to holistic policies that address sustainable development in general;**
- **Assess the integration of life-cycle thinking in policy-making;**
- **Evaluate compliance, enforcement, implementation and efficiency; and**
- **Identify existing policy gaps and synergies.**

1.3 Methodology

Method adopted for this assessment study included research and compilation of data through secondary sources, including national, regional and international annual reports, studies. Special focus was made on national annual reports prepared by line ministries and other relevant public entities. Primary sources of data were also used to both validate and update gathered information. The primary sources included structured and semi-structured interviews and meetings with the 4 lead sector experts assigned to support the design of the action plan. A survey has been designed and sent to focal points in relevant ministries and stakeholders, including the Egyptian National Cleaner Production Centre.

The accessibility of the primary data resources was facilitated by the ongoing consultation process, which entailed the engagement of sectoral experts, the creation of expert working groups

and the appointment of focal points in line ministries.

CHAPTER 2: SCP in the Egyptian Context

2.1 Definition

Sustainable production and consumption has been increasingly receiving worldwide attention since the Earth Summit in June 1992. Agenda 21 adopted at the United Nations Conference on Environment and Development (UNCED) concluded that*:*

"The major cause of the continued deterioration of the global environment is the unsustainable patterns of consumption and production, particularly in industrialised countries"[vi].

The widely acknowledged working definition of sustainable consumption and production was first coined by the Norwegian Ministry of Environment in 1994[vii]:

"The use of services and related products, which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not jeopardise the needs of future generations".

10 years after the Rio Earth Summit, the 2002 Johannesburg Summit called for a ten-year framework programme (10YFP) in support of national and regional initiatives to accelerate the shift towards sustainable consumption and production. In order to support this initiative, the "Marrakech Process" was launched at an international expert meeting held in Marrakech, Morocco, in 2003, and organized by UNDESA's Division for Sustainable Development and the UNEP.

The "Marrakech Process" includes regular global and regional meetings, informal expert task forces, and other related activities to promote and coordinate efforts towards more sustainable consumption and production.

The overarching goal of SCP is to gradually and progressively decouple economic growth from environmental degradation. It ultimately aims at sustaining economic prosperity, human wellbeing, while protecting ecosystems and enhancing biodiversity[viii].

However, the success of these new directives depend on the concerted efforts of different community stakeholders, including Governments, businesses and consumers. Transitioning to green economy can effectively contribute to changing attitudes towards more sustainable consumption and production patterns, thus contributing to achieving sustainable development objectives.

The concept of sustainable consumption and production (SCP) covers both supply and demand when addressing integrated management of natural resources. The production and supply chain of goods and services, including waste prevention and minimization, as well as recycling, reuse, recovery, and disposal are all important factors when considering SCP.

On the supply side, sustainable production entails the manufacturing of goods and the provision of services in an environment friendly manner. This translates to adopting cleaner innovative techniques in the design, manufacturing processes and management systems. Meanwhile, ensuring that natural resource inputs are utilized in the most efficient manner without polluting the environment throughout the entire life cycle of the product.

SCP should contribute to natural resource preservation, including water and energy, while simultaneously striving to develop more cost effective and economically viable processes. SCP should also ensure safety and health related measures for workers, communities and consumers. Weak versus strong sustainable production[ix] can be a useful benchmark and litmus test to review and monitor developments in adopting SCP. (See figure one)

Criteria for determining weak versus strong sustainable production may include the following:

- **Use of Renewable Energy Resources;**
- **Energy efficiency;**
- **Eco efficient design of product or service including packaging;**
- **CO2, particles and other emissions;**
- **Health and safety of workers;**
- **Waste generation, minimization and means of disposal;**
- **Level of compliance with regulations, legislations, codes and standards; and**
- **Availability of certifications, rewards and acknowledgments.**

Determining weak versus strong sustainable consumption can help measure progress towards achieving sustainability in consumption. Weak and strong sustainable consumption is also directly linked to weak and strong sustainable production. Sustainable consumption requires an increase in the production efficiency of goods and services associated with a reduction in resources consumed per consumption unit.[x]

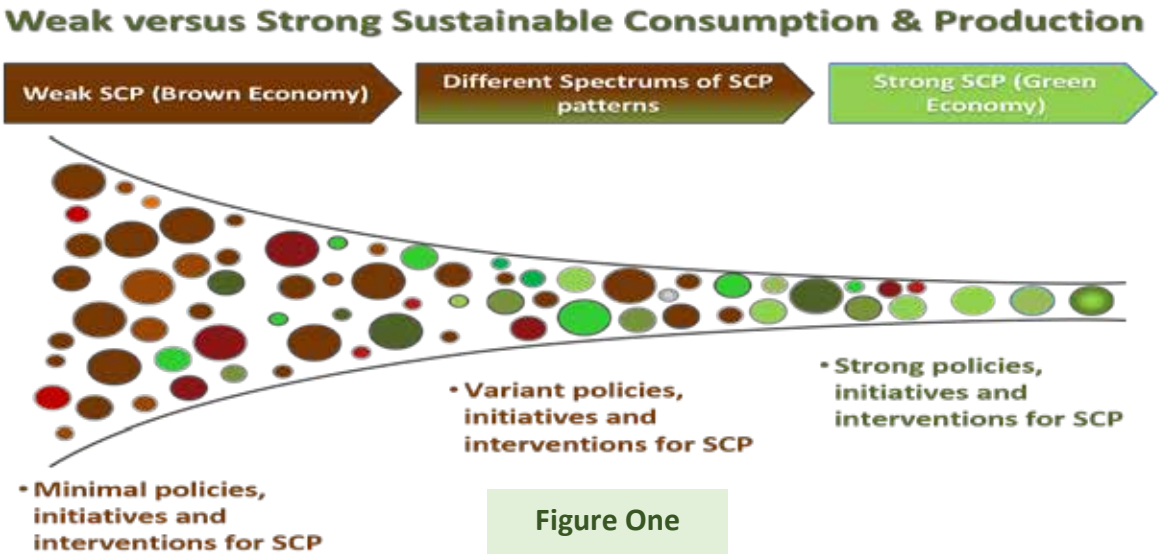

Figure One

On the demand side, sustainable consumption entails meeting consumer needs by improving quality of life and wellbeing without harming the environment. The Oslo Symposium in 1994 proposed a working definition of sustainable consumption as which has been widely used since:

"the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations".

Accordingly, weak sustainable consumption is linked to high rate of resource use per unit of goods or services provided and is also linked to the rate of consumption and purchasing habits of goods and resources.[xi] Alternatively, strong sustainable consumption is reflected in the purchase of eco efficient products as a result of increased consumer awareness for environmental concerns. The criteria for determining weak versus strong sustainable consumption may include:

- **Sustainable production design and processes;**

- **Product/service carbon footprint related to consumption/usage;**
- **Level of consuming/purchasing Eco efficient or green products and services including packaging;**
- **Availability of end of life product disposal methods; and**
- **Level of compliance of the product service with regulations, legislations, codes and standards including eco labeling and presented product details.**

2.2 SCP and the Life Cycle Approach

Another dimension that characterizes SCP at the global level, but could be challenging at the national level, is the integration of the life cycle approach when designing SCP related policies.

According to the "SWITCH-Med SCP Policy Toolkit: Mainstreaming Sustainable Consumption and Production into Key Economic Sectors in the Mediterranean" publication, the life cycle approach is considered one of the underlying principles of SCP, which include[xii]:

- **Addressing key economic and social basic needs such as unemployment and wellbeing;**
- **Decoupling of economic development from environmental degradation;**
- **Improving quality of life and wellbeing through poverty alleviation and promotion of sustainable lifestyles;**
- **Applying life cycle thinking, considering all the impacts that occur during the life cycle of the consumption-production chain;**
- **Stakeholders engagement from public bodies, private sector, research institutions and society at large; and**
- **Guarding against the re-bound effect, where efficiency gains are offset by resulting increases in consumption.**

The life cycle approach is basically about ensuring the efficient use and allocation of resources at each stage of the supply chain of the product/service, starting from design through manufacturing and consumption to even disposal means. It is considered as a critical prerogative in achieving sustainable development. (See figure 2[xiii])

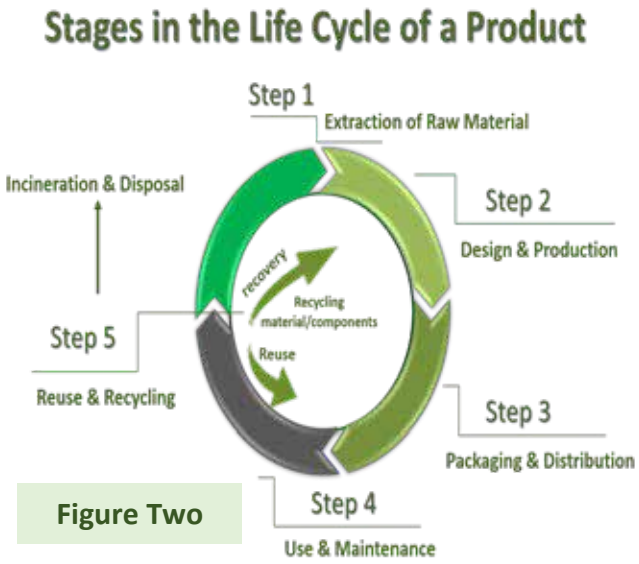

Figure Two

From the Government's perspective endorsing or integrating a life cycle approach from the cradle to the grave, implies that there should be policies, binding standards and interventions for each stage of the supply chain starting from material extraction until the end of life of the product and its final disposal.

This approach requires the Government to conduct life cycle assessment studies, resource efficiency audits and develop a solid knowledge and expert base. It also requires a proactive engagement with NGOs, the private sector, including SMEs, and civil society to mainstream sustainable practices. Investing heavily in human resources and research and development (R&D) is essential in making a transition to a green economy and sustainable production and consumption patterns.

2.3 SCP and Green Economy a joint consideration

Understanding the conceptual landscape for sustainable development, especially the link between GE and SCP can be simplified by analyzing the macro, meso and micro economic and policy levels related to sustainable development from the national Government's vantage point. [xiv] (See figure 3[xv])

This approach could significantly explain and distinctly clarify the link between sustainable development, green economy and sustainable consumption and production. The macro contextual level addresses generalized economic developments, demographics, politics, technological updates and social developments from a conceptual point of view. It focuses on the overall national policy of the country and its positioning at the international level.

At this level, sustainable development may be considered as the overarching goal, roadmap and guideline that ultimately impacts the entire country, its future reserves of resources and the wellbeing of future generations. The most widely used definition of sustainable development[xvi] is:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- ***the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and***
- ***the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."***

Applying sustainable development requires that countries adopt an overall general directive to achieve sustainability. Such directive will ultimately impact all constituents involved in the decision making process and their functions, each within their respective areas of specialization.

Considering the meso market level, it on a more disaggregated policy sectorial level focusing on the country's economic, social and environmental policy agenda, including natural resource management, economic strategic alliances, and meeting basic social and economic needs.

At this level, the Government has the executive power to set national level governance strategies and visions to translate sustainable development from a conceptual roadmap, to a full-fledged actionable national strategies. Within this context, green economy is perceived as the tool to realize and fulfill the overarching goal of sustainable development.

Due to its significance, the United Nations General Assembly identified "green economy in the context of sustainable development and poverty alleviation" as one of the main themes of the Rio+ 20. The Summit's Declaration 'The Future we want' introduced the concept of green economy as one of the tools that can be used to integrate environmental, social and economic pillars with the ultimate goal of attaining sustainable development.

Currently, the 'green economy' concept has become an important pathway towards achieving sustainable development. Many countries have been keen on developing national green strategies and have allocated a large percentage of their stimulus packages and budgets towards green investments.[xvii]

The concept promotes environmentally conscious investments in all sectors, including agriculture, industry, water, energy, building and construction, fisheries, forestry, and tourism. Investments encouraged by governments to shift from a brown economy to a Green one promotes the efficient use of resources, creates new market niches and trade, and creates jobs, while at the same time conserving the environment, improves health and human welfare.[xviii]

At its core, the gradual transition to a green economy can be seen as a strategy that should be adopted by the governments to decouple

economic activities from environmental degradation and natural resource depletion without halting economic prosperity and human welfare. A green transition entails the adoption of policies, legislations and market tools to support this process. The Government needs to create the necessary enabling conditions, for public and private engagement to facilitate this transition.

Finally, the micro enterprise or firm level is the most technical level of all three. It focuses on the internal environment of the organization or business operating and constituting domestic market interactions that can be traced throughout a supply chain of products and or services. This includes: vision, mission, strategy, resources, and operations throughout supply chain, processes, health & safety standards, standards and quality assurance. Accordingly, sustainable consumption and production is at the very heart of this level.

To conclude this discussion, the Government's ability to set SCP policies on the micro or firm level, can be considered as one of the main outcomes resulting from policies and measures aimed at transitioning to a green economy and achieving the overarching goal of sustainable development at the meso and macro levels respectively. Green strategies can only be successful if it comes influences attitudes towards SCP.

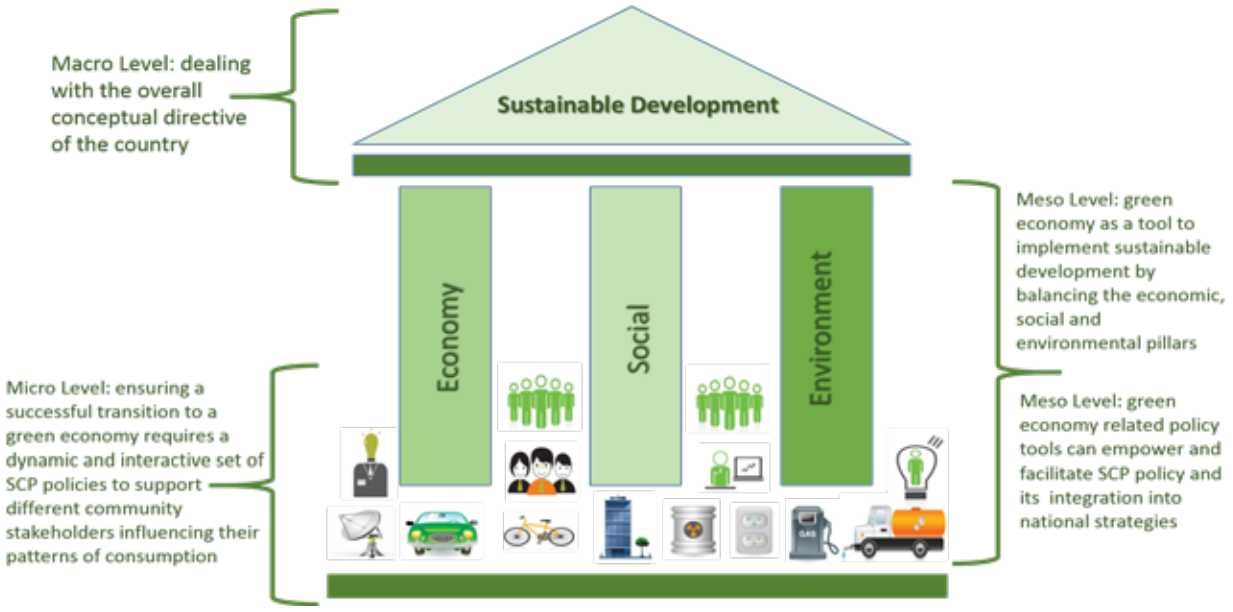

Figure Three

Having green policies in place, along with appropriate enabling conditions will increase the efficiency and maximize the benefits of designing and implementing SCP policies. This is also true when there is a strong policy SCP framework in place. According to the "Green Economy Scoping Study for Egypt" and other subsequent studies, a set of cross-cutting enabling conditions perceived as a prerequisite to greening the economy were presented to Government officials. These recommendations were provided in an effort to provide the decision making process with validated information and research. The following are the main crosscutting enabling conditions that were suggested[xix]:

- Creation of a strong governance system that promotes transparency, accountability, and stakeholder participation;
- Integrating environmental and social considerations with economic sectoral and macroeconomic policies;
- Effective regulatory framework including enforcement and compliance;
- Using market based incentives;
- Designing Trade policies to promote sustainable development;
- Human capacity building;
- Developing an R&D base in eco innovation; and
- Public awareness;

These enabling conditions can pave way for the Government to introduce a number of options and measures to support and strengthen SCP policies. The appropriateness of selected policy tools depends on local socioeconomic and environmental conditions and existing governance structure prevailing in the country. These include:

- National Strategies/ Action Plans;
- Regulatory instruments and standards such as legal penalties, bans, emissions limit, mandatory standards and codes, regulating resource extraction, regulating waste disposal, regulating production stages;
- Economic instruments such as taxes, exemptions, grace periods, fees, tariffs, feed in tariffs, green subsidies, caps, tradable schemes, eco labeling, awareness campaigns, web portals, trainings, certifications, workshops etc; and
- Creation of specialized councils/ institutions/agencies for implementation and management.

Transitioning to a green economy will therefore reinforce SCP in major sectors and industries, thus contributing to a sustained economic development path. It will contribute to job creation, poverty reduction, improvement in health and education, while protecting ecosystems and enhancing natural and cultural diversity.

2.4 Rationale for adopting SCP policies

Local Socio-Economic and Environmental Challenges

Egypt has long suffered from chronic socio-economic problems, including high unemployment, poverty, illiteracy, inflation and weak public services. The current Cabinet has inherited these long standing problems, in addition to new challenges that require immediate Government attention. These new challenges are also the accumulated results of decades of mismanagement and neglect of the environment, thus resulting in the depletion of natural resources, significant pollution and degradation.

However, with the political roadmap on track, Egypt's economic outlook is promising. The public is gaining confidence in the Government and there is a general optimism regarding the future of the country. Stability of the macroeconomic environment continue to constitute a concern for investors. Despite fiscal and budgetary difficulties, the government opted for adopting balanced fiscal policies rather than sever austerity measures. Thus maintaining a delicate balance between reduced public spending and the need

to meet act economic necessities and provide a more favorable climate were equity and social justice prevails.

The current governing regime spearheaded by the president Abdul Fattah El Sisi has earnestly declared and acknowledged the significance of sustainable development, and the urgent need to address climate change through sustainable consumption and production. *The following is part of his speech at the UN climate change summit related to the Arab region*[xx] *given in September 2013*:

The Fifth Assessment Report of the Intergovernmental Panel on Climate Change has sounded a clear warning that the world should turn to new development patterns, which include appropriate consumption methods and sustainable production systems which seek to mitigate climate change and adapt us to its adverse effects.

Our countries suffer the effects of climate change, prominently desertification. The international community is thus invited to support efforts for greening deserts by using recycled sewage water, which helps absorb greenhouse gases causing global warming, and which protects the environmental balance and bio-diversity.

On the socio-economic front, the Government is taking actions to upgrade the quality of social services and safety nets including public services such as health, education and housing. Plans have been put in place to expand the number of citizens that benefit from healthcare. In partnership with banks, the Government has launched several housing projects to provide limited income families, especially younger families with fordable housing.

A new food ration system, including electronic cards, has been recently implemented providing needy families and citizens with a wider range of foodstuff at affordable prices. These are but few examples of ongoing initiatives by the Government to integrate medium and low -income families in the economy. However, a number of challenges face the government; financing these social expenditures, and ensuring that the appropriate and deserving members of the community are the main beneficiaries is necessary.

By the end of December 2012 unemployment in Egypt was estimated at 13% and increased to 13.4% towards the end of 2013.[xxi] The unemployment rate of youth alone is estimated at 29%.[xxii] Not less than 700,000 jobs need to be created annually in Egypt to meet the demand for jobs[xxiii].

Moreover, poverty remains high. In 2013, the percentage of poor people in Egypt (those with less than 1$ a day) reached of 26.3% of the total population[xxiv]. Meanwhile, approximately 27.8% of Egyptian youth live below the poverty, while 24.1% live near the poverty line. Unemployment and poverty are further exacerbated by a constant increase in the population growth rate reaching 2.4% in 2014.[xxv]

Real GDP growth rate has slightly increased in 2012/2013 reaching 2.5%, when compared to a 2.1% in 2011.[xxvi] Inflation rate was estimated at 8.5 in 2014 compared to 11.5 % 2012/2013.[xxvii] On the other hand, increased public expenditure and limited sources of revenue has led to the widening of the country's budget deficit reaching 14% of GDP in 2012/2013 compared to 10.7 % in 2011-2012.[xxviii]

On the environmental front, Egypt is witnessing increased environmental degradation. Many factors have contributed to environmental deterioration in Egypt. These include failure to integrate environmental considerations in policies, plans, and programmes. Unsustainable practices accompanied by population growth, increased economic activities, high rate of urbanization, and an unsustainable production and consumption

patterns have all contributed to the inefficient allocation and use of resources.

According to a the Arab Forum for Environment and Development (AFED),Egypt's total bio-capacity is estimated at 51 million gha, while its ecological foot print is much higher, estimated at 133 million gha[xxix]. This highlights the serious gap between population needs and the country's available stock of biodiversity.

Other environmental impacts include air pollution resulting from contaminants and emissions, hazardous and non-hazardous waste, solid and wastewater pollution from urban centers, industry, agriculture and other activities. Egypt's carbon emissions have increased by over 136% since 1990[xxx]. There are also increasing concerns over Egypt's vulnerability to climate change impacts and the associated rise in average temperatures, increased frequency of sand storms, and the potential impact on sea level rise and the possible inundation of the Delta and coastal areas.

From the above, it is evident that there is an urgent need for a paradigm shift. Conventional reforms and policy agendas will not offer integral solutions to the chronic problems at hand. It is no longer a viable option to pursue long-term development goals without having the social and environmental dimensions at the core of policies and decision-making processes. Transitioning to a green economy and to a more sustainable consumption and production patterns represent a way forward for the country.

Present Consumption and Production Patterns

The country's Ecological Footprint per person grew 94% between 1961 and 2008[xxxi]. A fundamental changes in the way resources are used, produced, processed, transported and consumed is indispensable for achieving sustainable development.

In most instances Government policies continue to neglect taking into account environmental consideration in the different policies, plan, and programmes. This has led to the inefficient use of resources, increased rates of pollution and waste generation, environmental degradation with its negative impacts on health and human welfare.

On the other hand, consumption is influenced by traditional and cultural habits and practices, in addition to consumer purchasing power, socio-economic status, and rate of urbanization, globalization, and behavioral attitudes.

Accessibility to information, data and level of awareness are vital elements that can influence current unsustainable consumption patterns. Well informed and aware consumers will gradually shift towards more sustainable consumption patterns. Currently, lack of awareness and information in addition to other factors such as level of education have resulted in unsustainable patterns of consumption in Egypt.

Egypt is facing unprecedented and looming resource crisis; especially in energy, water and to a lesser extent food. A common cause for these alarming problems is that public demand has considerably exceeded supply. The table below provides an insight on the current supply/production, and demand/ consumption in the 4 sectors subject of this study. Information in the table indicate that current practices in food, energy, and water supply /production and consumption are unsustainable and continue to put pressure on the ecosystem and the environment.

SCP Trends[xxxii]	
Energy	• Egypt's energy production and consumption mix relies mainly on fossil fuels and Natural gas. • Around 85- 90% of total energy needs come from fossil fuels and natural gas, while the contribution of renewable energy is still limited. • In 2012, fossil fuels and natural gas represent about 40% and 56% of total energy supply respectively, while renewables excluding hydro, contribute to about 2.4%. • Pollution is high, CO2 emissions in 2011 from fuel and gas consumption reached 201.667 million metric tonnes showing an increase of 68% compared to the year 2000. • Adopted policies have led to unsustainable patterns of energy production and consumption, and consequently on the economy, the environment, and human welfare. • Since 2007, a gap between energy supply and demand has emerged. • The deficit has already reached 32 m.t.o.e[xxxiii] in 2011/2012. • It is expected to reach 50 m.t.o.e during the period between 2022 & 2050. This represents about 24% - 35% of total energy demand. • Egypt's oil consumption has surpassed domestic production making the country a net importer of oil. • Currently and due to limited foreign currency reserves and increasing government debt, Egypt is paying its energy bill through installments. • As for natural gas, the situation is equally alarming. Although Egypt used to be an exporter, the Government had been forced to direct its production to meet local consumption. • It is projected that by 2030 gas reserves in Egypt will be completely depleted, if the current trends continue, and if no additional oil or new gas reserves are discovered. • The Ministry of Petroleum expects the natural gas deficit to become worse, hitting 2.4 billion cubic feet per day during the 2017/2018 fiscal year, not counting the needs of new power plants, which are estimated at 1.2 billion cubic feet.[xxxiv] • Egypt will face a crisis in providing gas to all sectors in the coming period.[xxxv] • The deficit will deteriorate next year to 846 million cubic feet of gas per day, compared to its current 746 million cubic feet.[xxxvi] • While Egypt will produce an average of 5.03 billion cubic feet of gas, consumption will increase to 6.4 billion cubic feet, compared to only 5.9 billion cubic feet in the fiscal year 2013/2014.[xxxvii] • In March, the Egyptian cabinet approved the use of coal in generating electricity for cement plants. • The government was forced to allow cement companies to use coal in order to cover a portion of the gas consumption, thereby reducing the deficit and redirecting the use of gas for the energy demands of power plants. • Increased energy demand over supply accompanied by policies that encourage the inefficient allocation and use of energy have resulted in a serious electricity crises. • This has resulted in frequent almost daily blackouts to reduce the load in peak times; raising serious concerns about the sustainability of electricity supply in Egypt since electricity consumption has surpassed production capacity. • The power outages have also been detrimental to industry, which is operating at only 60 to 70 % of capacity, constraining an already weakened economy. • Egypt needs 2,500 Megawatts annually for the upcoming five years to meet rising electricity demand, at a cost of $2.5 billion a year.[xxxviii]
	• One in five Egyptians are experiencing food insecurity as a result of weak linkages in the food supply system[xxxix]. • About 17% of the Egyptian population – 13.7 million people were food insecure in 2011, up from 14% two years earlier[xl].

AGRICULTURE	• **Poor families spend more than half of their income on food[xli].** • **Chronic malnutrition among children has reached high levels and Egypt now has the world's highest rate of double nutritional burden (consumption of low-nutrition calorie-dense foods but suffering from nutritional deficiencies)[xlii].** • **There is a growing gap between long-term agricultural production capacity and rate of population growth.** • **Agricultural production's limited capacity is forcing Egypt to depend on food imports to achieve food security. Making it vulnerable to fluctuating prices and international supply trends.** • **Egypt already relies on the global market for up to 60 per cent of its food needs.** • **Shortage of arable land, and urban encroachment on fertile land agricultural land are factors leading to accelerated rates of agricultural productivity loss.** • **Unchecked environmental degradation have led to the contamination and desertification of already limited fertile areas.** • **Agriculture consumes more than 85% of Egypt's water supply of renewable resources, a share, where a small percent of efficient use can have a great impact.** • **The agricultural sector in Egypt currently generates around 30 million tons of agricultural waste annually. About less than 10% is recycled and the rest is either burnt or dumped in waterways.** • **Climate change is predicted to raise temperature and increase agricultural water requirements, while decreasing crop productivity. Food production in Southern Egypt is expected to decline by 30% by 2050.**
WATER	• **Demand for water consumption whether by households or by different economic sectors is increasing at an alarming rate. While water supply resources remain constant, and may potentially decline in the future.** • **Egypt's water security is at risk due to upstream due deteriorating upstream infrastructure, pollution and degradation.** • **In 2004, water share per capita was 950 m3/ per capita, and by 2025, water per capita share is expected to reach 600 m3/per capita and 350 m3/per capita by 2050.** • **By 2017, total water demand in Egypt is estimated to be 87.9 billion m3, representing a 30% increase over current consumption, while back in 2000 total water demand was 67.6 billion m3.** • **Current gap between the needs and availability of water is about 20 BCM/yr.** • **By the year 2020, water requirements will most likely increase by 20% (15BCM/yr).** • **In view of the expected increase in demand from agriculture and other sectors, such as municipal and industrial water supply, the development of Egypt's economy strongly depends on its ability to conserve and manage its water resources.** • **The Nile is the main renewable water source, due to geopolitics between states located on the Nile basin including unilateral decisions on upstream dams such as the 'Grand Ethiopian Renaissance Dam (GERD)'project, Egypt is vulnerable reduction in its historical acquired rights of the Nile's water flow to Egypt.** • **At the same time, Nile River is being exposed to heavy pollution that negatively affects the quality of water.** • **Untreated industrial wastewater, sewage water, agricultural drainage water continues to be discharged into irrigation networks.** • **Given its low rainfall and limited renewable groundwater aquifers, the country has no viable alternative water supplies but to look for non-conventional water resources such as desalination and waste water reuse.**

	• Water generated from non-conventional resources such as seawater desalination constitutes a negligible percentage of about 0.76% out of the total aggregate water supply. • Currently, the amount of collected wastewater is about 6.5 billion m3 /annually out of which only 3.65 billion m3 /annually is being treated. • Only 0.7 billion m3/annually of treated wastewater is being reused for irrigation. • The estimated value of the water requirement for the industrial sector during the year 2013 was 2.50 BCM/year. A small portion of that water is consumed through evaporation during industrial processes (only 0.7 BCM) while most of that water returns to the system in a polluted form.[xliii]
Municipal Solid Waste	• Egypt has a serious municipal solid waste management challenge accredited to the increasing volume of waste resulting from increased economic activity, rapid population growth, urbanization, and the uncontrolled urban dwellings and slum areas. • This has resulted in a fatigued and overwhelmed traditional waste collection and disposal system. • Government has yet to address the root causes of the problem and introduce long-term non-conventional solutions for waste avoidance, reduction, reuse and recycling. • Institutional reforms are also required to address the scattered responsibilities and the lack of efficient and effective public service waste management systems. • Lack of awareness and illiteracy has resulted in harmful disposal practices in poor areas and informal settlements. • High costs of proper disposal procedures, inadequate public services and lack of awareness have made waste burning a normal practice in many areas in Egypt. • Annual municipal solid waste generation has increased by more than 36% since 2000, with an estimated increase of 2-3 % per annum. It reached about 21 million tons in 2010, 9 million tons of which is generated by greater Cairo. • The country's efforts to increase the number of transfer stations, dumpsites, sanitary landfills, and treatment facilities failed to catch up with the increasing volume of generated waste. • Just about 64% of current waste is collected. The rest can be found accumulating in streets and residential areas, a pattern that is becoming part of the country's everyday life. • Of the 64% that is collected, only 10-15 % is recycled, while 7% is used for composting, 7% is disposed through sanitary landfills but the remainder is traditionally disposed of in uncontrolled dumpsites or through open burning.[xliv]

Opportunities for active SCP Engagement

Introducing innovative approaches to protect and enhance ecosystem services can create new market opportunities, create green jobs, and enhance the economic integration and empowerment of local communities. SCP policy interventions in the agriculture sector could promote sustainable agricultural practices, encourage the use of organic fertilizers, minimize water wastage, improve quality of soil, and increase productivity. In the water sector, policies targeting water quality and adequate sanitation could decrease water borne diseases, while at the same time increase access to clean and safe water in rural areas. Furthermore, integrating water efficiency measures in agriculture and in urban areas can lead to increased water efficiency and reduce water loss.

A gradual shift to renewable energy on the other hand, can lead to the opening up of new markets, generating new economic activities and services, and creating new jobs. It also addresses increasing energy demand and fluctuating prices of fossil fuels. Investing in recycling, waste to energy applications, reuse and waste

recovery, through community voluntary initiatives could counter the increasing problem of waste disposal that Egypt is currently facing. While investing in an integrated solid waste management system that promotes waste avoidance, recycling, reuse and recovery can address the solid waste management problem in Egypt. Promoting practices such as waste to compost and waste to energy applications can open up new market niches for SMEs, community enterprises and entrepreneurs will generate energy and cutting the use of fertilizers.

According to Egypt's Green Economy Scoping study a graduate shift to sustainable agriculture, renewable energy, energy efficiency, waste minimization, segregation and recycling could lead to the following benefits:

- Converting 20% of the total agricultural land from conventional to sustainable and organic cultivation could result in a saving of approximately 700, 000 tons of chemical fertilizers annually;

- It is also estimated that emissions from organic farming is between 48%-66% lower than in conventional farming;

- It is estimated that using drip irrigation could save up to 40% of water as compared to flood irrigation. This will result in water savings amounting to about 23 billion meter cubic;

-Efficiency in the use and allocation of water resulting from good governance and regulatory framework is expected to result in 10% savings in water consumption;

- Investing in household water saving devices for domestic use including residential building is estimated to result in water savings between 10%-20%;

- Energy efficiency measures in Egypt are expected to result in about 30% in energy savings;

- Renewable energy could also be a driver for job creation, with an estimated 75,000 new job opportunities in solar and wind systems design, manufacturing, operational services, and sales;

-Energy generation from waste can save expenditure on energy subsidies, save foreign currency paid for imports and create jobs; and

-It is also estimated that waste to energy and recycling infrastructure could employ up to 28 workers per ton, which can translate into thousands of jobs.

Given Egypt's new transformational economic agenda, embracing green and SCP policies by the Government can make a qualitative shift towards a sustained economic progress and social justice.

CHAPTER 3: Current SCP Status

Overview

The overall present policy, institutional and regulatory environment is gradually becoming more conducive to a shift towards more sustainable consumption and production patterns. However, there is no public entity that is entrusted with promoting SCP in Egypt. SCP related policies are managed by different ministries and institutions within specific national sectors, without necessarily being labeled as such these will be explored in details in the following sections of this document.

The Constitution

The country's new Constitution drafted in 2014, include several articles related to the environment and sustainable development. Article 27 recognizes the relationship between economic development, social justice, and safeguarding the environment. Therefore, signaling the possibility of adopting the three main pillars of sustainable development. The article indirectly acknowledges related tools and instruments to achieve sustainable development, including

green economy and sustainable consumption and production. It states that:

The economic system aims at achieving prosperity in the country through sustainable development and social justice to guarantee an increase in the real growth rate of the national economy, raising the standard of living, increasing job opportunities, reducing unemployment rates and eliminating poverty.

Article 32 is another relevant article that defines the role of the Government as a custodian of natural resources, which is owned by the people. The article directly refers to the importance of investing in renewable energy:

The state commits to making the best use of renewable energy resources, motivating investment, and encouraging relevant scientific research. The state works on encouraging the manufacture of raw materials, and increasing their added value according to economic feasibility.

While, Article 44 refers to commitments of protecting the Nile River and related historical rights. It states that:

The state commits to protecting the Nile River, maintaining Egypt's historic rights thereto, rationalizing and maximizing its benefits, not wasting its water or polluting it. The state commits to protecting its mineral water, to adopting methods appropriate to achieve water safety, and to supporting scientific research in this field. Every citizen has the right to enjoy the Nile River. It is prohibited to encroach upon it or to harm the river environment. The state guarantees to remove encroachments thereon. The foregoing is regulated by law.

Article 46 emphasizes environment as a human right, thus highlighting the importance of citizens' behavior in using and consuming resources, thus encouraging responsible consumption.

Every individual has the right to live in a healthy, sound and balanced environment. Its protection is a national duty. The state is committed to taking the necessary measures to preserve it, avoid harming it, rationally use its natural resources to ensure that sustainable development is achieved, and guarantee the rights of future generations thereto.

Following the same message, Article 79 states that:

Each citizen has the right to healthy and sufficient food and clean water. The State shall ensure food resources to all citizens. The State shall also ensure sustainable food sovereignty and maintain agricultural biological diversity and types of local plants in order to safeguard the rights of future generations.

It should be emphasized that it is the first time that the Egyptian Constitution refers explicitly to sustainable development both as a right and an obligation for current and future generations.

Institutions and Policies

The Ministry of State for Environmental Affairs (MSEA) which has recently changed in 2014 to become a full-fledged Ministry of Environment is the Government body overseeing environmental policy in Egypt. The Ministry is entrusted with the management of scarce natural resources in addition to the design and formulation of policies governing the state of the environment as designated by the Presidential Decree No. 275/1997. The Ministry's executive and administrative arm is the Egyptian Environmental Affairs Agency (EEAA), which is responsible for environmental protection and policy implementation.

EEAA was established under Prime Minister's Decree No. 631/1982 which was amended later to include Nature Conservation Sector within its scope of responsibility. The EEAA is responsible for the preparation of national environmental plans, draft laws related to the environment, coordinate international cooperation initiatives and oversee the implementation of environmental related projects. This is in addition to drafting codes and standards, and supervising the Environmental protection and development fund among other activities. The EEAA evalu-

ates on yearly basis an average of 64,000 environmental impact assessments studies for different projects; industrial, energy, communications, housing, tourism among others.
In 2001, EEAA formulated the National Environmental action plan for Egypt (NEAP) 2002/2017. The plan was a first national attempt to design and introduce an environmental policy framework for the country. In 2009, the preparation of a second NEAP was initiated to supplement the first plan and integrate sustainable development. It is not yet clear if the Government is currently engaged in formulating a new follow-up plan to the NEAP or if it is going to update it.

A National Committee for Sustainable Development was established in 2006 by a Prime Ministerial decree no# 47. The Ministry of Environment provides the secretariat of the Committee, which includes a representation from all ministries. Other committees were also formed to address related focus areas including:

- Egyptian Committee on combat of desertification
- National Committee for climate change
- Egypt CDM Council (Clean Development Mechanism)
- National Steering Committee on Biodiversity

The National Committee for Sustainable Development along with the Cabinet of Ministers and The Ministry of Environment have issued a national sustainable development strategy framework in 2007 to complement the NEAP. However, the Committee has not been able to effectively influence policy along more sustainable lines.

However, there has been progress in endorsing sustainable policy in public policy trajectory. This has been very clear in all newly issued reports for the state of the environment in Egypt by the EEAA. Currently EEAA's new policy directives are more precise and in line with global and regional environmental priorities and support sustainable development objectives. In 2013, the Ministry selected the industrial zone of the Sadat city as a pilot green and sustainable development city. The project aims at promoting energy efficiency in street lighting, upgrading the quality of drinking water in schools and designing a modern waste management process for the city. As environment cuts across sectors EEAA has recently initiated a process for integrating environmental and social considerations in sectorial policies. Jointly with the Ministry of Planning and Administrative reform it has developed a strategic document entitled "Green Economy as a Tool to Achieve Sustainable Development" in 2014.

The Ministry of trade and industry is another Ministry that is entrusted with supporting sustainable patterns of consumption and production. The corporate social responsibility center operating under its umbrella, has an agenda to incorporate and influence sustainable patterns of consumption and production into CSR initiatives and projects through opening a dialogue with the private sector and the raising of awareness related to sustainable development.

On the other hand, The Egyptian National Cleaner Production Centre (ENCPC) was established in 2005 as a service provider to promote cleaner production methods and applications. It was established in cooperation with the United Nations Industrial Development Organization (UNIDO) as a part UNIDO/UNEP global network of NCPCs/NCPPs (47 Centers) and part of the Egyptian Industrial Council for Technology and Innovation. The Centre provides the following services:

- Cleaner Production and Resource Efficiency Programmes;
- Energy Efficiency and Industrial Application of Renewable Energy;
- Environmental Impact Assessment Studies (EIA);
- Clean Development Mechanism (CDM) and Carbon Footprint;
- Chemicals Management:
    - Chemical Leasing Services
    - EU Directive on Registration,

Evaluation, Authorization of Chemicals (REACH)
- EU Directive on Classification, Labeling and Packaging (CLP).
- Persistent Organic Pollutants (POPS) .
- EU Directive on ROHs (Restriction of Hazardous Substances) .

- Industrial Waste Management, Recycling and Zero Waste; and
- Environmentally Sound Technology (EST) Transfer & Innovation.

Below is a list of projects that the Centre is currently engaged in:

- Assessment and Capacity Building in Chemicals and Chemicals Waste Management in Egypt- Quick Start Project in partnership with UNIDO UNEP-SAICM and in coordination with local stakeholders as (Federation of Egyptian Industry – Chemical Chamber, EEAA and Basel Convention Regional Office in Cairo for Arab Countries.

- Responsible Production Project, including a Practical toolkit developed by UNEP for chemical hazard management, Special focus on Small and Medium Sized Enterprises (SMEs).

- Resource Efficiency in Ceramics Industry including decreasing of Water Absorption for Floor Tiles and Decreasing of Water Consumption.

- Study of the Largest Loopholes within the Flow of Packaging Material - supported by EU and in implementation with ENCPC with Lebanon, and Morocco cleaner production centers.

- Industrial Waste Management: Reuse of Slag in Road Construction.

- Alternative Fuel in Egyptian Cement Industry.

- Fostering Renewable and Sustainable Energy in Africa through R&D "FORWARD" project.

- Promoting low–Carbon Technologies for Cooling and Heating in Industrial Applications

- Solar Water Heater Network Project.

In August 2014, the Ministry of Planning have launched a consultation process to integrate sustainability concerns in a number of themes covering the period 2015-2030. Main themes are Education, R&D and Innovation, Social Justice, Democracy, and Environment.

The consultation process is in its initial preparatory phase, and involved stakeholders are currently studying international experiences and success stories in this regard.

Concerning the environmental pillar, the strategy targets the halting of Egypt's accelerated path of deterioration and degradation, with focused efforts on the preservation of biodiversity and reduction of emissions.

The strategy also calls for the adoption of environmental unified indicators, including the environment performance index. A gradual transition to sustainable consumption and production is explicitly mentioned as a main target in the context of the environmental pillar. It aims to establish a comprehensive framework for sustainable production and clean industries.

A number of frameworks are to be established for sustainable agriculture, sustainable transportation, renewable energy and green buildings. Another target is related to adopting an integrated solid waste management system through the creation of appropriate infrastructure to reach a zero waste policy. In addition to turning waste and recycling into a profitable sector.

Similarly, the Social Fund for Development has recently accelerated its agenda of programmes regarding the environment, especially with respect to activities related to environmental compliance. All loans for projects provided by the Fund has the requirement of meeting national environmental regulations and compliance standards. In June 2014, the Fund provided LE.1 million to spread environmental awareness and alter public behavior with respect to harmful and unstainable practices in the Wadi EL Gadeed Governorate near Sinai.

These developments can be considered as indications of Egypt's preparedness to adopt and integrate SCP policies on the medium to the long term.

Legislation

Environmental Law No. 4 of 1994 is the main law that reflects concern for the environment and stresses the importance of safeguarding natural resources. The law provides incentives to those who implement environmental protection activities or projects and enact penalties against those who violate its provisions. The Law called for the creation of the EEAA and stated its role.

The law also provides for a mandatory environmental review for projects and industrial investments. It forbids the handling of hazardous substances and wastes or the construction of any establishment for treating such substances without a license from the competent administrative authority.

It forbids the import of hazardous waste or their transit through Egyptian territory. It is mandatory for all those who produce or handle dangerous materials to take appropriate precautions to protect the environment.

In accordance with the law, all establishments (industrial or other) are required to ensure that air pollutants emitted (or leaked) from their facilities do not exceed the maximum permissible levels. It is prohibited to incinerate, to dispose of or to treat garbage and solid wastes or to spray pesticides or any other chemical compounds, except in accordance with the conditions and safety measures specified in the Executive Regulations of the law.
The law was amended in 2009, to widen the scope of penalties and increase enforcement in case of environmental breaches. The executive regulations of the new amendments were issued in 2012. The law calls for the protection of biodiversity, ozone protection, water resources and conservation of natural resources. Penalties of environmental violations range between fining and imprisonment.

The law has no special stipulation for climate change mitigation, enforcing laws regarding sustainable development or related green or SCP concepts.

Voluntary Initiatives

It is worth noting that there have been several initiatives taken and led by the civil community, private sector and the banking sector related to sustainable development. Collaborative platforms such as: federations, semi-public councils, associations, and NGOs mainly representing businessmen and entrepreneurs, and experts. These platforms often operate in close proximity with governmental bodies making sure that a continuous dialogue between the private and the public spheres is maintained.

The Egyptian Forum on Sustainable Development (EFSD) supports the green economy concept and strives to complement the Government's agenda on sustainable development. The Forum founded in July 2012 as a not for profit platform established working groups in different priority sectors to develop a sustainable development strategy the core of which is advancing a green economy transition based on Egyptian challenges and priority needs.

EFSD technically contributed to the green economy scoping study for Egypt. In parallel the Forum has expertise to inform policy making in Egypt.

While, The Federation of Egyptian Industries houses the Environmental Compliance Office (ECO) established in 2002 by presidential decree no. 64, ECO provides consultancy services for the private industrial sector in the field of cleaner production, environmental management systems and energy efficiency. The compliance office was successful in providing funds and loans to more than 185 industrial facilities with funding reaching LE 215 million, 150 million of which were given as loans and the rest was self-funded by beneficiaries.

In September 2014, the National Banking Federation announced the establishment of the permanent commission on sustainable development to coordinate efforts, donations and projects being undertaking by banks to expedite the agenda for sustainable development and prioritize areas of focus.

This comes in the wake of a surge in corporate social responsibility projects and funding for consumer awareness campaigns, poverty reduction, and education, health and sanitation projects to support sustainable development by both national and international business and banks operating in the local market.

In the same context and due to the effort of businesses and investors, EL Gouna city along the Red Sea was recognized as a prestigious tourist attraction and became the first city in Africa and the Arab Region to receive in August 2014 the Global Green City Award. The award is sponsored by the United Nations Environment Program and given to cities displaying substantial measures and efforts in progress within the field of sustainability.

The Ministry of the Environmental and the Italian Ministry of Environment, Land and Sea and Mr. Sameh Sawiris on behalf of city of El Gouna in Hurghada have signed a protocol of a joint programme to implement a joint programme for the sustainable management and carbon neutral in the city of El Gouna for a period of 3 years. The project will be implemented taking into account equity considerations.

The protocol aims to support transforming the city of El Gouna towards low-carbon emissions through the analysis of the current energy consumption and carbon emissions and finding solutions to cut down on emissions.

The above section aimed at tracing developments and progress in Egypt towards an overall sustainable transition resulting in growth and social inclusiveness. It provided a snapshot of current overall policy updates that the country is adopting. A more specific review will target important emerging sectors that have a high potential for SCP and green policies.

CHAPTER 4: Sectorial SCP Developments

Elements of SCP in Energy

Egypt is currently facing a serious with an energy crisis. Egypt's current energy crunch is hampering its economic recovery, its ability to attract new investments and is limiting its productive capacity with the potential negative impact on GDP. Unsustainable patterns of energy production and consumption is one of the main reasons that has led to the current situation.

The country has witnessed this summer an increasing rise in electricity cuts and blackouts. Outages have led to public discontent, mainly due:

- A widening gap between production and consumption;
- Lack of fuel and natural gas supply to power generating plants;
- Rising need to increase the number of power generating stations by commissioning new ones, which is a directive

that the Government is currently endorsing; and
- Inability to meet the increasing import bill for energy.

In addition, current pricing of fossil fuels, natural gas and electricity do not reflect the true costs of production, operation and maintenance of supplied energy.

According to the 'Green economy scoping study for Egypt', the sector is in need for an immediate paradigm shift towards more sustainable patterns of production and consumption. There is a need to re-direct the course of Egypt's energy mix towards renewable energy in the long-term. The Government is urged to adopt stringent energy efficiency policies in the short-term to limit the exponential rise in energy demand as compared to supply.

However, the proponents of clean and renewable energy have been forced to step-up their lobbying efforts, since heavy industries, such as the cement and fertilizers industries have called upon the Government to provide them with short-term and less costly energy resources alternatives including coal. Due to the urgency of energy shortages, the government had to approve the importation of coal but with stringing environmental standards for transportation, handling and usage. Similarly, nuclear energy is being considered by reviving the Dabaa nuclear station project, which has been abandoned in the past.

This recent development has been perceived as an additional incentive for decision makers and other community stakeholders to invest in renewable energy infrastructure projects in partnership with the private sector. On the short run there is a consistent focus on energy efficiency applications and approached to limit the capacity and consumption gap. Accordingly, accelerating renewable energy related policies is necessary to address the current unsustainable energy production patterns, while encouraging energy efficiency could address the current unsustainable consumption patterns.

Institutional and Policy Framework: The Ministry of electricity and Renewable Energy is responsible for developing the long term energy policy, setting electricity prices and supervising the study and execution of essential energy projects. This is in addition to overseeing the general operational plan & energy generation, transmission and distribution. The Ministry is also entrusted with expanding the utilization of new and renewable energy resources through the New & Renewable Energy Authority (NREA), which is operating as its affiliate. The Ministry is also responsible for supporting energy efficiency efforts.

NREA is responsible for implementing the Government's strategies related to renewable recourses. It also oversees renewable energy projects, expedite renewable energy use, disseminate information and engage the private sector to invest in renewable energy.

NREA also has a research center, established in collaboration with European Union and Italy. The center has testing laboratories for solar thermal and solar cells (Photovoltaic) and energy efficiency labs for home appliances.

As an independent entity, The Electric Utility and Consumer Protection Regulatory Agency was established by a presidential decree no. 326 for the year 1997. Assuming a safeguarding role, the agency makes sure that all activities of electric power generation, transmission, distribution, and sale, are carried out in compliance with the laws and regulations in effect in the Arab Republic of Egypt, especially those relating to environmental protection.

Thus its main role is a regulatory one including the setting regulations that ensure lawful competition in the field of electric power production and distribution in the best interests of the consumer. The agency facilitates the introduction of regulations to support the commercial and

residential use of renewable energy applications, thus creating a demand in the local market.

The Ministry of Petroleum is also involved in decision making concerning Egypt's energy mix and it has a strategic role in ensuring the upstream and downstream availability of fuels and natural gas to power the electricity network and stations. The Ministry of Environment with its general mandate is also another influential public institution that should be closely working with the Ministry of Electricity and Renewable Energy and NREA and the Ministry of Petroleum.

The Ministry of Environment has a dedicated energy efficiency unit and other ministries and governorates are following suit by establishing their own energy efficiency units. The Ministry of Tourism have established the green unit to promote sustainable tourism, including practices and applications of water and energy efficiency practices. The governorates of Ismailia, Menya and Qalyubia have established their own energy efficiency units.

According to the Minister of local development, energy efficiency units will be established at the governorate level to work in compliance with the Ministry of Electricity and Energy. In general, public entities have been instructed to use energy saving measures on their premises.

On the other hand, the Industrial Modernization Center (IMC) a subsidiary of the Ministry of Trade and Industry has an Energy Efficiency and Environment Protection Programme. This programme aims at reducing the specific energy consumption per unit product without any negative impact on the product quality or quantity, as well as limiting polluting emissions and identification of possible direct uses of solar energy. The Ministry of Industry and Foreign Trade has the ability to introduce or impose cleaner production and efficiency related applications on local industries. This may be implemented through the Egyptian Organisation for Standardisation and Quality, the General Industrial Development Authority and the General Organisation for Export and Import Control measures can be taken in this regard.

A leading efficiency unit has also been established in 2009 within the Information and Decision Making Center (IDSC), which functions under the umbrella of the Prime Minister's Cabinet. The unit has been engaged in projects and strategies to propagate energy efficiency practices. The head of the unit had been urgency all ministries to establish their own energy efficiency unit subsidiary to the one at IDSC to create synchronization and harmonization efforts and coordination between different public entities. The energy efficiency unit under discussion provide a variety of capacity building and training services especially to public sector servants.

There are numerous inter-ministerial committees and working groups also involved in cross-sectoral policies, including energy efficiency and energy insecurity. In an effort to coordinate and harmonize related activities of institutions, especially ministries, in 2006 a Prime Ministerial decree was issued to create the Supreme Council for Energy. The Council is headed by the Prime Minister and with the involvement of all concerned ministers. The Council supervises the various policies and strategies of the energy sector, including their supportive legislative and institutional frameworks, policy initiatives, investment programmes, and energy pricing. There are also serious talks to create an Energy planning authority by a presidential decree to act as a clearinghouse for all energy related initiatives.

In order to promote sustainable energy production in 2008, the Supreme Council for Energy, endorsed Egypt's renewable energy strategy goals and targets. Accordingly:

Renewable energy share should reach 20% of the total generated energy by 2020 as 12% wind, 6% Hydro and 2% solar.

RE targets will be met through governmental projects (about 33% from the total installed capacities). Whilst, projects by the Private Sector (about 67% from the total installed capacities).

In July 2012, the cabinet approved a plan for providing solar energy in Egypt.

It was decided to install about 3500 MW from solar energy by 2027.

In its attempt to reach these targets NREA has put in place a package of policy tools to encourage private sector investment. Some of these policies, approval of zero customs duties on wind equipment, land use policy for wind power developers, and soft loans, carbon credits, and Power Purchase Agreements (PPAs). The table below shows additional policies:

August 2009	Issuing competitive bids to enable international private sector to invest in electricity generating from wind power.
	Approval for applying feed-in tariff in concept.
June 2012	Allowing Investors and industries to build & operate RE power plants to satisfy their electricity needs or to sell electricity to other consumers though the national grid.
January 2013	Board of Director of the Egyptian Electricity Utility & Consumer Protection Agency to apply net metering system to encourage the implementation of PV Roof Top systems for residential uses. The consumer can set photovoltaic systems on the roof top of buildings and sell the electricity generated to the grid through a separate meter.
September 2013	Heavy industries will be obliged to use a percentage of its electricity consumption from RE sources starting from 2015.

In principle, the Cabinet agreed on activating the Renewable Energy Fund to cover the difference between the selling price of energy generated from renewable energy resources and its average production cost. However, no further development has taken place. Additionally, a draft master plan for renewable energy in Egypt has been finalized but awaiting review and feedback. The study was undertaken by European Commission and the German Development Bank (KfW).

Concerning wind energy, the Government has already installed the Hurgada wind farm, which has been operational since 1993. The local manufacturing of some components of the system reached about 40% of the unit. The farm generates 5MW and saves about 1000 tons of oil equivalent, while reducing emissions of about 2800 tons of CO2. Another operational wind farm is the Zafarana wind farm, which produces 545 MW. Its implementation took several stages starting in 2001, and was installed in cooperation with Germany, Denmark, Spain and Japan Governments.

To meet the wind energy target, 7 projects with a total capacity of 1340 MW are currently under implementation. This is in addition to 4 projects that are expected to produce up to 1470 MW.

As for solar energy, according to NREA, the total installed capacity of solar heaters in Egypt is about 750 thousand square meter. There are about 20 Egyptian companies working in the field of manufacturing, importing, and installation of solar water heaters. Also, there is an ongoing cooperation with the tourism sector to expand on the utilization of renewable Energy applications by increasing the use of solar heaters in hotels and surrounding villages.

The Kuraymat solar thermal electricity generating plant is another facility with a total capacity of 140 MW, including a solar share of 20 MW. The project is considered as the first CSP project in the region. The Government also decided to power remote villages by Photovoltaic System in Siwa and Matrouh Governorates.

Moreover, the Government is planning to implement a solar thermal power plant with a capacity of 100 MW at Kom Ombo, and 240 MW with governmental and private sector investments, including 2 photovoltaic power plants, each with a capacity of 20 MW by NREA. This is in addition to 10 projects, each with a capacity of about 20 MW by the private sector based on Build, Operate, Deliver (BOD) system.

Additionally, a framework agreement was signed in October 2013 between Egypt and the United Arab Emirates to finance a number of energy generation projects in off-grid locations. The project commenced in March this year and it will provide solar energy to nine governorates: North and South Sinai, Sohag, Al-Wadi Al-Gedid, Luxor, Aswan, Marsa Matrouh, the Red Sea, and Qena.

In September 2014, the Government has finally announced its implementation of the feed in tariff after approving it in principle a couple of years back. This important step aims at encouraging both household and private investors to rely more on clean energy. The tariffs will be fixed for the next five years to send a signal of stability to investors. The tariffs at which the Government will buy solar energy is set at LE. 0.848 for each kilowatt (kw) produced by households, and LE. 0.901 for industrial producers under 200 kw, and LE. 0.973 for producers of 200 to 500 kw.

Tariff rates for large-scale projects are set to be calculated in U.S. dollars as these projects are expected to be the result of foreign investments. While, projects between 500 kW and 20 MW will receive $0.136 per kWh and those producing 20 MW to 50 MW will be entitled to $0.1434 per kWh.The tariffs will be paid in domestic currency according to the exchange rate at the time of payment.

Moreover, the Government has decided gradually phase out electricity subsidies over a five years' period, thus completely liberalizing the market and rendering renewable energy investments a competitive edge over other sources of energy.

To promote sustainable energy consumption and efficiency, the Government in 2007 had set a target to reduce energy consumption by 20% by the year 2020. The energy efficiency Unit at the IDSC is working to meet this target and coordinate actions across sectors and between different public authorities. Through the Unit, a joint energy efficiency, a street lighting programme is currently being implemented by the Ministry of Finance, Ministry of Local Development, and Ministry of Electricity and Energy. The Unit has also launched an initiative called "shamsek Ya Masr" to promote energy efficiency. The initiative aims at undertaking 100–150 projects related to the installation of solar

photovoltaic and CLF lamps in public premises in 3 years. The initiative is intended to save 5-8 MW by the end 0f 2016. The Unit will provide all required technical support, including the preparation of tenders and required standards, in addition to providing staff training. Services are provided free of charge in addition to covering the cost of 50% of required equipment. So far, about 24 governorates and 7 ministries, other public bodies have asked to join the initiative.

In 2013, the Minister of Electricity and Renewable Energy started the installation of a photovoltaic system, with capacity of about 40 kw. The system is intended to provide electricity for Government buildings, as well as for 10 roads across its premises. Some governorates and cities have followed suit such as Sharm El Sheikh where streetlights were provided by solar energy.

The Ministry of Electricity have also recently launched a national energy saving campaign "Wafar min Agl Masr" for the public providing reports and information and response to inquiries. This initiative is well coordinated with other related initiatives in order to ensure consistent flow of information.

Furthermore, the Government is currently considering requesting all ministries to use diesel cars and energy efficient appliances to save electricity. The Ministry of Industry and Foreign Trade has already requested ministries and governmental authorities and institutions to reduce their electricity consumption by 20%. It has also announced that starting from 18 June 2014, air conditioner manufacturers and importers will be obliged to import or produce devices that can only be set on 20 degrees as a minimum cooling system and 28 degrees as a maximum heating system.

Legislation: A new draft law for electricity has been drafted few years back, but had never been approved or ratified. Recently in September 2014, Egypt's Cabinet amended on the law governing the New and Renewable Energy Authority (NREA) to allow it to form companies to produce and sell electricity. The authority is now capable of attracting investors into partnerships within the renewable energy sector, after the Minister of Electricity's approval of forming the new companies. NREA will also be able to make use of the revenues generated from the sale of electricity, as per the new amendment to become self-sustainable. In the same month, the Cabinet approved a Presidential Decree encouraging the production and use of electricity generated from renewable energy .The legislation would encourage the private sector to invest in generating electricity from renewable energy, however no further details have yet been disclosed.

The Ministry of Investment has further proposed a draft investment law which will provide incentives and facilities for obtaining land plots and licenses, as well as encouraging businessmen and investors to buy land for installing solar energy plants. The law is still under review.

Regarding unsustainable energy consumption, there is no general legal framework for energy efficiency (EE) measures. However, there are ongoing research to produce energy efficiency standards. And the Ministry of Housing Utilities and Urban Communities has initiated energy efficiency building codes. Another significant step taken to promote EE in the building sector was the establishment of The Green Building Council (EGBC) in January 2009. Membership in the EGBC consists of both national and international personalities including government ministers from Cabinet level agencies, officers from respected NGOs, prominent businessmen, seasoned labor leaders, and major contractors. One of the objectives for establishing this council is to provide a mechanism to encourage building investors to adopt BEECs as well as other sections of existing codes that satisfy both

energy efficiency and environmental conservation. The council developed the Green Pyramids non obligatory EE rate system for buildings. The council is organizing the 1st Arab Forum on Sustainable Communities and Green Building in December 2014 with partnership of Regional Office for Arab States of the United Nations Human Settlements Programme (UN-Habitat). The forum will tackle climate change and adaptation, sustainable communities, green economy, and access to sustainable housing, green building, energy efficiency, and water resource efficiency as main themes.

Voluntary Initiatives and Partnerships: to complement Government policies to promote sustainable energy consumption and production, the private sector and different businesses operating in the Egyptian market have recently channeled their CSR activities to face Egypt's energy crisis. The Egyptian Initiative for Energy Conservation (EIEC) was formed as a joint public-private initiative between oil and gas companies in and the ministry of electricity and energy and the Ministry of Petroleum. The initiative aims at promoting sustainable consumption of electricity and energy efficiency by altering consumers' behavior. The initiative launched an advertising, media and public awareness communication campaign for energy-saving practices financed by the member companies.

As a result of the Government policies the number of interested national and international private sector investors have increased in 2014. Suez Cement, Egyptian subsidiary company of Italcementi Group is investing in a joint project with Italgen, an Italian specialized company to construct a wind farm. The first phase aims to produce 120 megawatts before the end of 2015 with about LE1.4 billion ($200 million) worth of investment.

Moreover, many industrial companies both public and private are undertaking studies to adopt cleaner production applications in their operational facilities. Companies are also increasingly sponsoring conferences, forums and workshops related to energy as a platform to disseminate information, public awareness, increase the involvement of community stakeholders and open a two way dialogue between business and the Government.

The Regional Centre for Renewable Energy and Energy Efficiency (RECREE) located in Cairo is engaged in research activities and information dissemination that reinforces current Government efforts. The Center is working on eco labels for solar products and systems for Egypt in cooperation with Egyptian Organization for Standards and Quality Control (EOS).

The Solar Energy Development Association (SEDA) is another active entity primarily engaged with international cooperation partners, including German International Assistance GIZ in the development of the solar energy (heat and power) market in Egypt. This is done by developing competencies of entrepreneurs, SMEs, and businesses in the field of solar energy. Its activities also include introducing innovative and creative technologies and solar applications and supporting the creation of a locally market driven demand for solar energy systems.

On the other hand, the German-Arab Chamber of Industry and Commerce (GACIC), the largest business organization promoting cooperation between Germany and the Arab world, supports a green transition in Egypt. The GACIC launched an online business platform on renewable energies. It provides companies operating in solar energy, wind energy, hydropower, geothermal, biomass and energy efficiency with information regarding international markets dealing with renewable systems. Moreover, GIZ is one of the most active international programme in Egypt with regards to supporting the Government green and SCP related policies, implementing projects, supporting start-ups, NGOs and other entities. GIZ has a strategic focus on climate change related issues and environmental protection, with emphasis on the promotion of renewable energies and energy efficiency.

Elements of SCP in Agriculture

Agriculture's role has been gradually diminishing as a driver of Egypt's economic growth. Thus shifting power to the services and industrial sectors as the main drivers of the economy. Although this has been the trend in any economic development trajectory of emerging economies, for Egypt agriculture remains vital. Having a thriving agricultural sector is vital to absorb Egypt's large pool of unskilled labor. It is as essential for addressing rural poverty, illiteracy and overall underdevelopment. But most importantly, Egypt has in the past years suffered from food insecurity and lack of ability to provide basic food needs of a significant portion of the population, especially among the poorest segments of the population.

The gravity of the situation has further escalated with the fluctuation of international food prices, Egypt's diminishing foreign reserve and its limited ability to pay its external debt bill. This is notwithstanding the load of energy, food, water and electricity subsidies on the Government's budget and its inability to provide a varied consumer basket of goods to the most vulnerable of families, particularly in rural areas.

In this light, it is safe to conclude that Egypt is facing demand and supply side challenges within the sector, which require immediate and urgent attention. On the demand side, the gap between production and consumption of strategic food crops is widening driven by high annual population growth rates, urbanization and unsustainable patterns of consumption and high food wastage.

On the supply side, water scarcity concerns, climate change threats, land degradation, irrigation network inefficiencies have led to exacerbating problems in the sector. Agriculture consumes more than 85% of Egypt's water supply a large amount of which is lost due to widespread conventional practices such as flood irrigation. These outdated agricultural practices have led to loss of agricultural biodiversity, increased desertification, land erosion, and increased loss of soil fertility.

Institutional and Policy Framework: The Ministry of Agriculture and Land Reclamation is considered to be the main Government body responsible for designing and implementing policies to integrate sustainable agricultural practices.
However, the Ministry of the Environment, the Ministry of irrigation and the Ministry of planning are all institutions that can directly and indirectly contribute to and reinforce the role of the Ministry of agriculture. The extent of coordination between the different Government bodies, is not made very clear unless steering through a coordinating institution.

The Ministry of Agriculture and Land Reclamation has issued in 2009 a ' Sustainable agricultural development strategy towards 2030', which is an ambitious document with a comprehensive view on addressing chronic problems of the sector through the introduction of organic agriculture, the reduction of chemical fertilizer uses, sustainable management of natural resources and enhancing efficiency in the use of water.

So far, the strategy has not been implemented through an actionable framework or pilot projects and activities. However, the strategy lacked coordination with the Ministry of water resources and irrigation to align water distribution priorities to different economic activities, given Egypt's limited traditional water resources.

The Ministry has recently taken steps towards designing and implementation of policy tools to encourage sustainable agriculture. In a bid to gradually phase out subsidies on chemical fertilizers while redirecting the same financial benefits to small farmers; the Prime Minister on the suggestion of a committee representing the Ministries of Agriculture, Industry and Trade

and Investment and Petroleum have approved increasing the prices of chemical fertilizers to reach LE. 2000 per ton of urea fertilizers and LE. 1900 for nitrate fertilizers. The financial gains from this price increase will be entirely used to finance small farmers' cooperatives.

Additionally, a recently issued ministerial decree number 1456 for 2014, has announced the creation of a 'Sustainable Agricultural Development' Council within the Ministry fully dedicated to propose and design policies to encourage sustainable agricultural practices. The Council is to be responsible for also implementing the sustainable agriculture 2030 strategy. The Council will also tackle the issue of rice growing since it represents a huge burden on Egypt's scare water resources. One of the suggested proposals regarding rice growing is putting a ceiling on the land to be used for rice growing and reducing it to 1.2 million feddan down from 2.2 million feddans currently cultivated rice. This is in compliance to the proposed quantity of land allocated for rice growing as per the 2030 sustainable agriculture strategy.

To reinforce the sustainable agriculture strategy 2030, the Prime Minister held a meeting in July 2014 to review the strategy and discuss possible steps to implement it. In October 2014, a national programme for addressing agricultural waste and reuse have been also announced by the Ministry of the environment.

The Government has also announced its aim to reclaim a total of 4m across the nation beginning with 1m of agricultural land within one year. The tendering procedures have not yet been announced. The Ministry has considered several proposed agricultural models during a meeting attended by Prime Minister and Ministers of Water Resources and Irrigation, and Petroleum.

According to the Ministry of Water Resources and Irrigation, Water Resources land reclaimed is to use water saving and efficient techniques and methods. However, expert question the use of non-renewable ground water versus the use of treated or reused waste water in irrigation. In April 2014, the Minister of Agriculture has witnessed the operational launching of a mobile water desalination station powered by solar energy in Matrouh governorate in an effort to supply non-traditional water resources for local agricultural activities at the governorate level. It is being considered as a pilot project with the intention to have it replicated in rural and remote governorates in the country. The project was sponsored by one of the largest NGOs in Egypt.

Another national project currently being considered is the development of Al Alamein city as a sustainable and green city.

Efforts have been made to implement some provisions of the sustainable agriculture 2030 strategy. However, these steps are not enough to shift towards sustainable agricultural practices.

The Ministry of Planning is taking concrete steps to develop a vision for sustainable agriculture to be assesses against measurable indicators to track progress. It is therefore essential that the role of different Government entities in encouraging sustainable agriculture are clearly defined to avoid bureaucratic ambiguity, and the evasion of responsibility. While simultaneously the role of Ministry of local development is coordinating the work of governorates and local authorities including local agricultural offices. The ministry is responsible for transferring all the needs of local authorities to the cabinet including local needs of the agricultural sector in different governorates. The coordination of land protection activities, prevention of building on agricultural lands, improving the livelihood of farmers, and providing the services of education, health, etc.... to the rural communities is the mandate of this ministry in cooperation with line-ministries that have a more technical role in policy design.

Legislation: Agriculture is governed by several laws that date back to the sixties of the last century. Several modifications and changes have been made since then and until now that resulted in a mosaic of regulations that may not be in harmony with each other. A major modification in laws related to the agriculture sector is badly needed.

The Ministry is currently seriously discussing the introduction of tougher legislations and penalties for illegal land grabbing. There are also regulations and specifications in place to control irrigation methods in reclaimed land. However, this is an apparent lack of comprehensive legislations and incentives. Lack of enforcement and compliance continue to encourage unsustainable agricultural practices, including the overuse of pesticides and chemical fertilizers in addition to water inefficiency and wastage.

1-Law No. 53 of 1966 on Agriculture

The Law is divided into three volumes :Agricultural production, livestock, and avoiding encroachment on agricultural land and maintaining its fertility. The law is amended by the following laws: 59 of 1973, 100 of 1976, 31 of 1978, 59 of 1978, 54 of 1980, 207 of 1980, 16 of 1983, 225 of 1984, 2 of 1985, and 231 of 1988. The law comprises 195 Articles.

Penalties prescribed in the law, which resulted in the breach of the provisions hereof do not commensurate with the practical reality where more than forty years have passed since its promulgation. While, the penalties prescribed for the erosion, destruction and building on agricultural land do not commensurate with the crime of the erosion, destruction of lands due to restricting the power of the competent authority represented by the Minister of Agriculture or the governors authorized by the Minister to suspend the removal works as long as the issue is presented before a court of law.

2-Act No. 122 of 1980 on Agricultural Cooperation

This Act comprises of 85 Article 85 and was amended by Law No. 122 of 1981, and this amendment comprises of 6 Articles. According to experts, the law has deficiencies related to the duration of the board of directors and the capital of the cooperatives, literacy requirements and also the penalties prescribed by this law do not commensurate with reality on the ground.

3-Desert Land Law No. 143 of 1981

The Law comprises of 29 Articles, including the disposition of private state-owned lands. Once more, penalties prescribed, the con-tents of the law that determine and specify the desert governorates, set feddan prices and the number of feddans set as a maximum for individuals and families have all been criticized. These laws do not reflect reality, rather are in conflict with it. Moreover, the Provisions of article 22 has been found unconstitutional on the jurisdiction of the Supreme Con-situational Court over the disputes arising from the provisions of this law.

In summary, the current enacted laws do not reflect the realities of the sector nor do they benefit farmers and contribute to their wellbeing. Although these laws were set a long time ago to assist in achieving sustainable development, deficiencies in law represented in failure to empower farmers, can have a negative impact on future legislations and amendments that deal with sustainable agricultural practices, especially when it comes to enforcement, penalties, compliance and pricing.

Voluntary Initiatives and Partnerships: In addition to Government efforts, the private sector including entrepreneurs, startups, social ventures and family owned farms have led numerous initiatives for horticulture produce and organic farming creating an export market. Several NGOs have also been established to pro-

vide education, skills and awareness raising related to composting, hydroponic farming and other sustainable agricultural practices as well.

However, there is no partnership arrangements between these initiatives and the Government to replicate it on a wider scale and ensure their sustainability. Business groups involved in organic farming are more inclined to forge relations with startups, SMEs and NGOs working in the same field to create knowledge, open market opportunities locally and out of social and community services.

The private sector should be incentivized to reduce their environmental footprint, engage in sustainable farming methods. Public-Private partnership should be encouraged.

Elements of SCP in Water

The water sector is another sector facing serious challenges. The demand for water in Egypt has been steadily increasing as a result of increased population growth, urbanization, agricultural and industrial expansion, and due unsustainable water consumption practices.

Egypt's allocated water withdrawal quota from the Nile River is set at the fixed amount of 55.5 billion m3 as per 1959 agreement with the Sudan. Meanwhile, other traditional resources including rainfall, floods, and deep and shallow groundwater are nonrenewable and or limited.

According to Egypt's green economy scoping study, by 2017, total water demand in Egypt is estimated to be 87.9 billion m3, representing a 30% increase over current consumption. By 2025, water per capita to 600- 500 m3/ per capita by 2025 and further decrease to 350 m3/per capita by 2050.

Water generation from non-conventional resources has not been adequately utilized due to the high cost of infrastructure and facilities needed for that purpose, mainly seawater desalination plants.

Untreated industrial wastewater, sewage water, agricultural drainage water continues to be discharged into the Nile. While, non-conventional resources, such as seawater desalination constitutes a negligible percentage of about 0.76% out of the total aggregate water supply.[xlv]

According to the 2030 Strategic Vision for Treated Wastewater Reuse in Egypt report by CEDARE, in 2011, total wastewater amounted to about 7 BCM, out of which 3.7 BCM were untreated out of the 3.368 BCM of treated wastewater, only 0.271 BCM were reused directly for agriculture, while the remaining amount was wastefully disposed to the national drainage network.[xlvi]

Other non-conventional resources include agricultural drainage, and treated sewage water reuse, desalination of brackish groundwater, representing a small share in the total water supply. Furthermore, outdated infrastructure and deteriorating municipal and industrial water and wastewater distribution networks have largely contributed to huge water losses.

Another major strategic concern for Egypt is the Grand Ethiopian Renaissance Dam. Experts have raised serious concerns regarding the negative impact of the dam on the Egyptian water quota. The Grand Ethiopian Renaissance Dam will require that its reservoirs be filled with about 14 billion cubic meter of dead storage water to start generating electricity, in addition to a total potential of 74 billion cubic meter of storage water, which can significantly affect flow to Egypt. There are also concerns about the potential negative impacts of water discharges and seepages into underground aquifers and generally on the surrounding ecosystem.

Experts emphasize the need to address all technical issues within a legally binding framework to secure Egypt's historical water rights, uses and needs from the Nile. There should also be

an Egyptian monitoring team to ensure that the quantity of water due to Egypt is maintained.

A tripartite meeting between Egypt, Ethiopia and Sudan was held in Cairo on 20-21 October as part of the ongoing negotiations between the three countries. Following the meeting, Egypt, Sudan and Ethiopia have agreed to identify an international firm that will study the hydrological and socio-environmental impacts of Ethiopian dam on Egypt and Sudan. However, Ethiopia is going ahead with the construction of the Dam without waiting for the impact assessment studies to be concluded.

Institutional and Policy Framework: The Ministry of Water Resources and Irrigation (MWRI) is the main body responsible for water related policies and strategies. It is entrusted with monitoring water resources and rationalization of its use, planning and implementation of water development projects, and the management of the irrigation system in Egypt. Policies designed and implemented by the Ministry is supported by the National Water Research Center (NWRC). It is a research entity within the MWRI. Under the Centre's umbrella, twelve research institutes support ongoing projects and national development plans.

MWRI is expected to work closely with the Ministry of Agriculture since about 85% of Egypt's water goes to agriculture. In 2015, the Government has planned an additional 1 million feddan to be reclaimed for agricultural purposes in addition to the existing 8 million reclaimed feddan. Some experts are concerned that usage of non-renewable groundwater might not be the best option, and alternative sources and measures should be introduced.

MWRI is currently updating the National Water Resources Plan (NWRP) to address water scarcity, including the efficient use and conservation of water resources. Although the extent to which the plan was previously implemented or policy incentives have been designed to facilitate its implementation had not been made clear. Any updated national plan should take into consideration the exponential increase of population with the associated increase in demand for drinking water and sanitation. Existing state of infrastructure and unsustainable water consumption practices are considerations that need to be accounted for in the new plan.

The Ministry launched several public awareness campaigns to influence public consumption patterns and behaviours towards more sustainable lines. The result was moderate at best due to limited funding and campaign design. As early as 2000, a project to upgrade irrigation systems and modernize surface irrigated methods have been proposed as opposed to traditional flood irrigation system

However, modern surface irrigation although is cheaper that drip irrigation has not been integrated or mainstreamed as the method of choice. Although less efficient than drip irrigation modern surface irrigation if practiced in the old lands and delta could save 10%-15% on the medium term while is cost effective.

The Holding Company for Drinking Water and Wastewater operates under the umbrella of the Ministry of Housing and Utilities was established in accordance with the Presidential Decree No. 135/2004.

The main goal of the company is to treat, and distribute drinking water and collect, treat and safely dispose of wastewater, either directly or through affiliate companies.

Recently, the Company has developed a plan to extend drinking water to the deprived villages, as well as to improve the maintenance, replacement and renovation activities for drinking water and wastewater collection systems. Public awareness campaigns were launched in order to raise awareness of users to more efficient

and sustainable consumption patterns, including those causing pollution of waterways and underground water.

Also a 2030 national wastewater strategy by CEDARE Water Department has recently been developed to extend wastewater treatment for agricultural purposes. The strategy aims at promoting the sustainable use of water from all sources, underground, Nile water, rainwater though limited, and treated wastewater. The use of desalinated seawater is currently being seriously considered. A committee operating under the Ministry of housing and utilities, and through has been created in 2013 to be in charge of setting codes for desalination for domestic purposes.

The management for irrigation and drainage water has being handled by MWRI, while drinking and sanitation by the Ministry of Housing and Utilities through the holding company is representing a constraint for designing an integrated water management strategy for the country. Water subsidies and low water tariffs continue to encourage inefficient and wasteful water consumption practices.

Legislation

Law 12-1984 dealing with irrigation and drainage water is the principle piece of legislation regulating the use of water, water management for different uses, including for agricultural purposes.

The law refers to the prohibitions for the use of untreated wastewater for agricultural purposes and sets limits for the use of underground water. It also includes provisions related to fines against violators, and conflict resolution mechanisms. However, the law was not able to enforce modern irrigation methods, cut on water losses or enforce penalties and punish violators. There is a lack of monitoring, enforcement and compliance tools in the system. However, the law is currently under review and open for amendments. Among the suggested amendments to the law is adding more stringent measures and high penalties for noncompliance.

Regarding water quality and polluting discharges, law 84 enacted 1982 was introduced to prohibit the discharging of untreated water and other solid pollutants and waste into the Nile River, irrigation and drainage canals, lakes and groundwater without a license issued by the MWRI. Licenses can be issued as long as the effluents meet the set standards. The license includes both the quantity and quality that is permitted to be discharged. Discharging without a license can result in a fine.

Law 4/1992 sets "effluent standards" for solid and hazardous waste and for discharges into the marine environment. Lack of enforcement and compliance continue to be the main hurdle facing the sustainability of the ecosystem. In 2008, standard and codes were set for wastewater reuse, and have been lately updated following the strategic 2030 Vision for reuse.

Voluntary Initiatives and Partnerships: The importance and contribution of International organizations to support Government efforts in water infrastructure project have been a significant instrument in Egypt's attempts to attain sustainability in water production and consumption.

As far as donor support is concerned, the European Union is a major supporter of Egypt's water sector. Activities and programmes include investment in infrastructure, especially dealing with wastewater infrastructure leading to direct community benefits and job creation. Other activities include the introduction of good practices and guidelines for efficient and sustainable water use practices, policies, and measures. The EU has funded a set of reform benchmarks in the water sector, activities cover the following:

- Decentralized water management systems
- Cost Recovery and water losses
- Climate change adaptation
- Expanding water and wastewater coverage to protect the public health of the Egyptian citizens from water-borne diseases

The GIZ also supports a number of water related projects. Some of the projects under the programme include the following:

- Water Resources Management Reform Programme with Ministry of Water Resources and Irrigation (MWRI); Ministry for Agriculture and Land Reclamation (MALR)

- Water and Wastewater Management Programme (WWMP) with Ministry of Housing, Utilities and Urban Development (MoHUUD).

The World Bank, the IFC and other regional and international development banks are also financing water related projects under a partnership framework arrangement with the Government. Egyptian-Dutch Advisory Panel on Water Management (APP) was another collaborative arrangement with the government with a positive results and came to an end.

Elements of SCP in Municipal Solid Waste

Solid waste, especially municipal solid waste management and disposal issues have been a constant reminder of public policy failure in what should be considered as an essential and basic public service.

Inappropriate waste handling, storage, collection, treatment and disposal practices dominate the sector. The public on the other hand, lack adequate encouragement for adopting a more responsible approach to waste disposal. Disposal often takes place in open dumpsites, where often waste pickers mainly from the informal sector separate recyclable materials and the rest is left out to pile up in the street or burnt causing pollution and methane emissions.

Although solutions and management approaches have been proposed by specialized experts and practitioners, the key to the solution lies in designing an integrated system that involves different actors, including the informal sector and the general public and that takes into account collectively the various processes (Collection, transportation, treatment and disposal).

Proper regulations and incentives should be in place to encourage the involvement of different stakeholders and ensure their continuous engagement. Addressing the solid waste problem in Egypt is challenging given the existing governance and institutional set up. This is aggravated by the estimated annual increase of 2.3%.[xlvii]

Institutional and Policy Framework: The institutional framework for the sector has been relatively unclear for many stakeholders. A new Ministry of Urban Renewal and Informal Settlements has been created and is now responsible for municipal and construction and demolition solid waste management, while other waste streams including agricultural, hazardous and industrial waste, are managed by the Ministry of Environment.

In 2000, the Ministry of Environment adopted the "National Strategy for Integrated Municipal Solid Waste Management". However the extent of the success of this strategy remained modest. The Government established an Inter- Ministerial Committee (IMC) in 2009 to address the situation representatives from all key Ministries. The committee was entrusted to put a vision of SWM policies.

As a result, a National Solid Waste Management Programme (NSWMP) has been established with the support of German development cooperation to overhaul the policy governance of the sector. The Programme also aims to address current weak legislations and upgrade institutional capacity and eliminate conflicts of redun-

dant work scopes. In 2014, an "Egyptian Integrated Solid Waste Management Sector (ISWMS)" was established under the Ministry of Environment as a first step towards the establishment of an Egyptian Solid Waste Management Agency (ESWA).

According to the 'Green economy Scoping Study for Egypt', some of the policies taken by the Government include a tax break for 5 years and custom duty exemptions for SWM equipment and in 2006, a strategic framework for the recycling of MSW was also introduced.

The Government has also attempted to restructure the conventional informal waste collection system the "Zabaleen" or garbage collectors and integrate them in formal systems.

In December 2013, the Ministry of Environment launched a national campaign for "Separating waste from the source" to collect wastes from houses by separating it into two main components: organic wastes and solid waste. The campaign started with a pilot project in Giza's northern district of Dokki.

The Ministry of Environment jointly with the Ministry of Local Development, have taken some measures to tackle the waste problem creating new landfills and announcing the provision of lands for building new recycling factories. An Egyptian Forum for Solid Waste Management was inaugurated the same year in order to exchange knowledge and social visions in the field of solid waste management.

Meanwhile strategic directives for the waste management sector were drafted through the support of the NSWMP. The strategic directives highlights key principles and approaches for reforming the waste sector. This is expected to be followed by a national strategy for waste management.

The new Ministry for Urban Renewal and Informal Settlements is now responsible for the enhancement, general cleanliness and improvement of slum areas. The Ministry is expected to put in place a new system to deal with municipal solid waste piling up in many residential areas in several urban and rural settlements in Egypt. It is also exploring business opportunities in recycling. The long term goal is that an integrated solid waste management system is introduced in Egypt which aims to prevent, reduce, recycle, reuse, recover, and the save disposal of waste. The Ministry is trying to find methods and plans to integrate the informal sector, who have already formed their own syndicate, into the formal sector, as well as encourage the creation of small businesses in solid waste sector.

Legislation: The country has no unified solid waste management law. However, the sector is governed by law 38/1967 on General Public Cleanliness and law 4/1994 for the Protection of the Environment. The Public Private Partnership Law 67/2010 (the PPP Law) issued by the Ministry of Finance is considered a facilitating framework to invest in the sector's infrastructure and integrate interested private sector investors. A unified law for waste management is currently being prepared for consultation with the various stakeholders.

Voluntary Initiatives and Partnerships: The Government has generally been assuming full responsibility in managing solid waste in Egypt. Apart from the informal sector who used to play an important role, the private sector involvement has remained modest due to lack incentives and an institutional framework to encourage its involvement. The previous experience of subcontracting companies for waste collection proved inadequate. In rural areas there is a general lack of service provision and it is common that NGOs for CDAs assume such responsibility for a fee paid by the residents. According to the country report on the solid waste management in EGYPT 2014 by SWEEP-Net, the successful engagement of the private sector requires a clear and transparent management

system. This should include clear technical specifications for tendering, codes, regulations, safety requirements, compliance and monitoring mechanisms.

CHAPTER 5: Conclusions and Recommendations

The following tables is an effort to present the main findings and policy considerations facing Egypt's current SCP policy agenda:

Main General Findings	• **Unsustainable consumption and production patterns continue to represent one of the main challenges facing Egypt and is resulting in inefficient allocation and use of resources, increased generation of solid and wastewater, and pollution.** • **Unsustainable consumption patterns are in many instances attributed to inherent cultural and social habits.** • **There is an increasing recognition for the need to make a qualitative shift towards green economy as a means to achieve sustainable development.** • **For the first time, the new Constitution has included sustainable development as a path that the Egyptian economy need to pursue to address its current challenges.** • **The concept of sustainable development is therefore being gradually taken up by policy actors in the country.** • **However, the way to realize a green economy including a national mechanism for cleaner production and consumption require more than a political will.** • **Consequently, there is no clear policies specifically tailored to encourage sustainable consumption and production in patterns.** • **There is generally a lack of integrated policymaking, where environmental and social consideration, including SCP considerations is integrated in sectoral and macroeconomic policies.** • **In all discussed sectors there is a clear lack of the SCP policy component as existing set of tools and policy incentives apart from effort of introducing general policies for encouraging sustainability without a clear organization or structure.** • **Weak institutional governance structure, regulations, compliance and enforcement are serious obstacles.** • **There is a need for a reformed governance and institutional structure that can support the transition to a green and sustainable economy, and more sustainable production and consumption patterns.** • **There is generally a lack of inter-ministerial coordination and consequently lack of policy harmonization.**

	• There are patterns of conflicting policies and lack of harmonization effort despite the existence of national committees, councils and other collaborative platforms. • Public institutions lack the enforcement and implementation ability and tools needed to successfully turn strategies and plans into an operational action plans with clear target and benchmark. • Lack of a governmental mechanism to ensure stakeholders participation, including civil society, associations and the private sector in the process of formulating policies and strategies in general. • Lack of informed decision makers that have the skills and administrative qualities to implement SCP related policies. • Lack of technical skills in the public sector and the absence of specialized institutions entrusted to implement SCP policies in the different sectors. • Lack of public system of checks and balances and a strong monitoring and evaluation mechanism to review progress and impediments. • Lack of research and development structure in the form of research centers, universities, grants, scholarships to encourage innovation and creation of locally cheap technologies that promote SCP applications and methods.
Energy Sector	• Egypt is increasingly witnessing a widening gap between energy supply and demand thus impacting negatively on municipal consumption and economic activities. • Energy and fuel subsidies, representing a huge burden on Government budgets is creating market distortions and contributing to unsustainable production and consumption patterns. • The phasing out of fuel and energy subsidies by the Government is a first step in the right direction. • Bridging the gap between supply and demand through imports has resulted in increasing the import bill for fuel and gas. • Measures need to be introduced to increase energy efficiency by upgrading the electricity network grid and enhancing the operational capacity of existing facilities. • There is a need for the Government to come up with an energy mix that satisfies the future energy needs for Egypt that relies on unconventional sources of energy, with emphasis on renewable sources of energy. • Though the Government has recently approved the importing of coal to meet the current shortage of fuel, major investments are being directed towards renewable sources of energy. • Greening the energy sector and adopting sustainable production and consumption patterns will go a long way into promoting the sustainability of the energy sector. • The energy sector is the most active sector in adopting SCP related policies due to the energy crisis which have forced the Government to take action and look for alternative solutions. • The Government has launched a number of energy efficiency campaigns addressing the public, but there is a lack of institutions, policies and tools to address unsustainable consumption.

	• There is a need for a well-structured institutional framework to govern the sector and act as a clearing-house for the many initiatives, policies and projects taken by a wide variety of institutions from different cross cutting sectors. • Lack of a legislative framework that encourages the use of renewable energy and efficiency measures.

Agriculture Sector	• The sector suffers from low productivity, especially related to the production of strategic produce such as wheat and corn which made food security a real challenge. • Excessive use of synthetic fertilizers and pesticides. • Lack of community and rural development including lack of physical infrastructure in the form of roads, water and sanitary connections, and lack and deficiency in the social services including education and health. • Lack of adequate regulatory framework and incentive measures that encourages investments in agriculture and agriculture related activities. • Low production due to limited natural resources and unsustainable agricultural practices. • Increased water and energy consumption and waste generation and CO2 emissions due unsustainable agricultural practices, including irrigation practices. • The agriculture sector consumes about more than 85% of water available in Egypt from different sources, thus required immediate water saving measures to address the water scarcity challenge in Egypt. • Lack of job opportunities due to decreasing level of investments. • Steps taken lately by Government to integrate sustainability considerations in developing agriculture strategy 2030. • There is a serious attempt by the government to phase-out subsidies on chemical fertilizers, which have been a main factor of the environmental degradation witnessed in this sector. • Lack of serious implementation of a sustainable agricultural strategy through long-term policies and programmes. • Lack of policies addressing unsustainable food consumption. • The level of coordination between the Ministry of Agriculture and Ministry of Water Resources and Irrigation can benefit from closer coordination and policy harmonization. • Absence of laws and regulations that encourage sustainable agriculture practices. • Lack compliance and enforcement.

	• Egypt is currently considered as a water scare country. • Unsustainable water consumption patterns in almost all sectors have seriously drained Egypt's water resources. • Government reliance on the use of non-conventional water resources is modest. • There are a number of measures that address different aspects of water management and conservation, however these are not built around an integrated framework.

Water Sector	• There is limited use of recycled wastewater for other than those directly related to human consumption. • It is becoming increasingly apparent that seawater desalination will represent an important source for water supply in Egypt. • Private sector engagement in projects and investments is rather limited. • There is a lack of a clear long-term strategy and vision for integrated water management in Egypt. • There is a lack of an integrated water management strategy that oversee an action plan for supplying water from non-conventional resources, replenish water ecosystems and conserve water. • There are no specific policies introduced by the Government that is designed to encourage SCP. • There is a lack of seriously addressing the consumption side of the water crisis with the exception of some awareness campaigns. • The institutional setup with different ministries responsible for water related issues is not conducive of attaining a harmonized framework for water management. • There is a growing need to improve water supply through the introduction of non-conventional sources of water such as water reuse and desalination, and the introduction of policies and measures that promote its sustainable use and consumption. • There are different laws and regulations that govern water management and no unifying water law to integrate existing regulations.

Municipal Solid Waste	• Despite Government efforts, municipal solid waste collection and disposal remain an unresolved issue indicating the need for a new policy perspective to face the increasing volume of waste and related health hazards. • Organic municipal solid waste and agricultural waste can provide a source for energy, compost, and for other uses. • Integration of the informal sector into the economy remains to be one of the outstanding issues that need to be resolved. • There is no unifying or dedicated law for solid waste management. • So far Government efforts have fallen short of designing an integrated management system for the sector. • Undertaken campaigns for sorting at the source has not been successful. • There are no specific policies to encourage SCP in particular. • Current policies undertaken by relevant ministries do not focus on re-directing the sector from a liability to a profit generating one through recycling. • It is not clear how the current institutional setup will realize the goal of zero waste that has been set as a goal of the Ministry of Urban Renewal and informal settlements.

[i] This publication refers to two main studies conducted in support of a Green Economy Transition in Egypt. 1: CEDARE, 2013, Transitioning to a Green Economy in Egypt: A Scoping Study, Egyptian Environmental Affairs Agency, and United Nations Environment Programme. 2: Ministry of Planning, 2014, Green Economy as a Tool to Attain Sustainable Development in Egypt, Ministry of Environment, CEDARE and SFD.

[ii] UNEP definition

[iii] The Annex to the letter dated 18 June 2012 from the Permanent Representative of Brazil to the United Nations addressed to the Secretary-General of the United Nations Conference on Sustainable Development.

[iv] This study was prepared by Egypt National Cleaner Production Centre in cooperation with United Nations Environment Programme UNEP in August of 2008.

[v] For more details, please refer to the roadmap document dedicated to explain the consultation process specifically tailored for the SCP Action Plan.

[vi] United Nations Conference on Environment and Development. (1992). Agenda 21, Rio Declaration, Changing consumption patterns. New York: United Nations.

[vii] Norwegian Ministry of Environment, Oslo Symposium on Sustainable Consumption, 1994. This definition is the one selected by the UN as representative conceptualization of SCP.

[viii] UNEP, 2010, ABC of SCP Clarifying Concepts on Sustainable Consumption and Production.

[ix] The concept of Strong and Weak SCP has been adopted from 'Sustainable Consumption and Civil Society State of Play in the Mediterranean Countries', CP/RAC, 2007. The concept was utilized to further explain and provide enhanced understanding of the definition of SCP.

[x]'Sustainable Consumption and Civil Society State of Play in the Mediterranean Countries', CP/RAC, 2007.

[xi] Ibid

[xii] The principles are mentioned and adapted from in the "SWITCH-Med SCP Policy Toolkit: Mainstreaming Sustainable Consumption and Production into Key Economic Sectors in the Mediterranean", 2014 by the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) of the Mediterranean Action Plan of the United Nations Environment Programme (UNEP/MAP), within the framework of the SWITCH-Med programme, financed by the European Union.

[xiii]The figure was adapted from the "SWITCH-Med SCP Policy Toolkit: Mainstreaming Sustainable Consumption and Production into Key Economic Sectors in the Mediterranean", 2014.

[xiv] A level analysis approach (Macro, Meso and Micro) was adopted to categorize different national vantage points to better explain the conceptual underpinnings of sustainable development, green economy, and sustainable consumption and production.

[xv] The figure is a visual illustration meant to depict the relationship between sustainable development, green economy and SCP.

[xvi]Brundtland Report, Our Common Future, 1987.

[xvii] CEDARE, 2013, Transitioning to a Green Economy in Egypt: A Scoping Study, Egyptian Environmental Affairs Agency, and United Nations Environment Programme.

[xviii] Ibid

[xix]Ibid

[xx] The statement was given on 23/9/2014.

[xxi]Ministry of Finance, August 2014, the Monthly Report.

[xxii] CAPMAS 2014

[xxiii] CEDARE, 2013, Transitioning to a Green Economy in Egypt: A Scoping Study, Egyptian Environmental Affairs Agency, and United Nations Environment Programme.

[xxiv] CAPMAS 2014

[xxv] Ibid

[xxvi] Ministry of Finance, August 2014, the Monthly Report.

[xxvii]Ibid

[xxviii]Ibid

[xxix] CEDARE, 2013, Transitioning to a Green Economy in Egypt: A Scoping Study, Egyptian Environmental Affairs Agency, and United Nations Environment Programme.

[xxx]Ibid

[xxxi] Ibid

[xxxii] Most trends has been first presented in the CEDARE, 2013, transitioning to a Green Economy in Egypt: A Scoping Study, Egyptian Environmental Affairs Agency, and United Nations Environment Programme. Otherwise, new information will be referenced below.
[xxxiii] Million Metric Tonnes
[xxxiv]Ministry of Petroleum, news, 2014.
[xxxv] Ibid
[xxxvi]Ibid
[xxxvii] Ibid
[xxxviii] Ibid, was also repeatedly mentioned by the country's president when addressing the energy crisis.
[xxxix] Main findings of the study, 2014, Death on the Nile: Egypt's Burgeoning Food and Water Security Crisis, Future Directions International.
[xl] Ibid
[xli]Ibid
[xlii]Ibid
[xliii] Trend mentioned in Ministry of Water Resources and Irrigation, Egypt, February 2014, Water Scarcity in Egypt report.
[xliv] SweepNet Solid Waste Management Report, Egypt, 2014.
[xlv] CEDARE, 2013, Transitioning to a Green Economy in Egypt: A Scoping Study, Egyptian Environmental Affairs Agency, and United Nations Environment Programme.
[xlvi] CEDARE, 2014, 2030 Strategic Vision for Treated Wastewater Reuse in Egypt, Ministry of Housing and the Holding Company for Water& Wastewater and its subsidiary wastewater companies, Ministry of Water Resources and irrigation, Ministry of Environment, Ministry of Health, and Ministry of Industry and Trade.
[xlvii]SweepNet Solid Waste Management Report, Egypt, 2014.

Developing National Action Plans (NAP) for Sustainable Consumption and Production (SCP) contributes to poverty alleviation, environmental sustainability and the development of a green economy. National SCP-NAPs are considered the first step in a country's response to the 2015 adopted Sustainable Development Goals (SDGs) and in particular Goal 12: Responsible consumption and production.

The SCP-NAP process in Egypt is based on the 2013 "Green Economy Scoping Study" that assessed the potential for Egypt's transition to a green economy and sustainable development. This study focused on water, agriculture, energy and municipal solid waste.

The main objectives of the document at hand is to lay a detailed preparatory baseline and assessment study to support the process of formulating the framework for an Action Plan for sustainable consumption and production (SCP) in Egypt.

It explores recent updates relevant SCP policies and initiatives in an effort to monitor the current challenges and opportunities that face emerging priority sectors in Egypt, including energy, waste, water, and agriculture.

It maps existing policy gaps, examines existing trends and patterns of policy changes and assess efficiency of their implementation. in addition, it aims to identify priorities, projects, and activities of national strategies primarily involved in promoting sustainable consumption and production, including laws, agreements, market instruments, and voluntary initiatives.

UNEP-DTIE as coordinator of the national SCP policy component of the EU-funded SwitchMed program provided advisory services and technical assistance to the national SCP-NAP process in Egypt.

Ministry of Environment (MOE)
Egyptian Environmental Affairs Agency (EEAA)

30 Misr Helwan El-Zyrae Road, Maadi, Cairo, Egypt

Tel: (202) 25256452
Fax: (202) 25256490

E-mail: eeaa@eeaa.cloud.gov.eg
Hot Line: 19808
Public Service: 25266178 - 25256470

SwitchMed Programme is funded by the European Union

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www.unep.org

United Nations Environment Programme
P.O. Box 30552 Nairobi, Kenya
Tel.: ++254-(0)20-762 1234
Fax: ++254-(0)20-762 3927
E-mail: uneppub@unep.org

UNEP